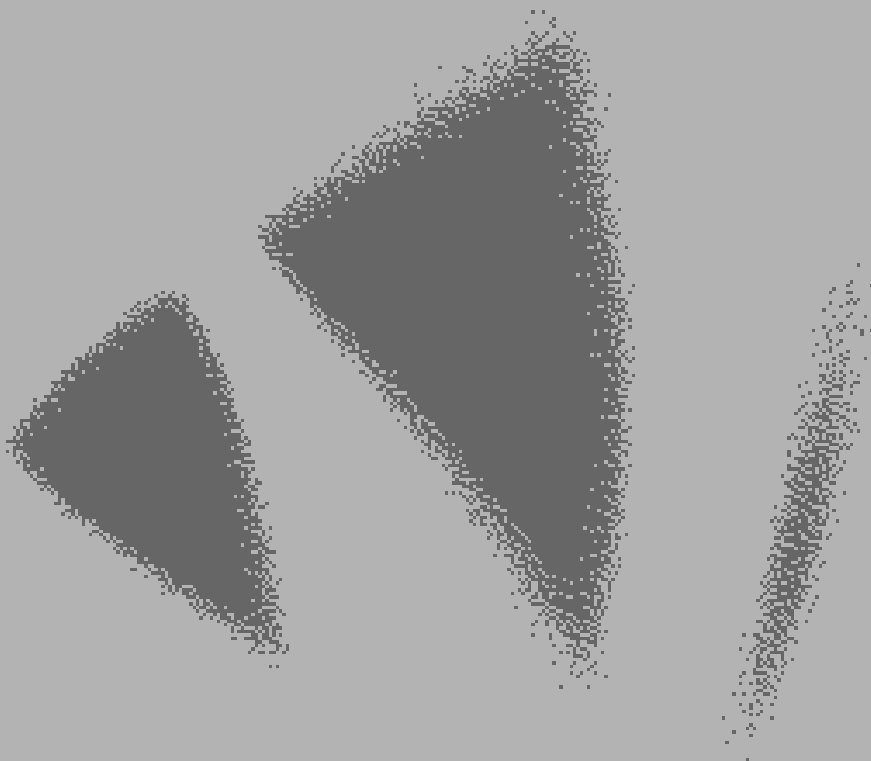




International Air Services

Inquiry Report

Report No. 2
11 September 1998



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ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ACTO	Australian Cargo Terminal Operators
AGPS	Australian Government Publishing Service
AIPA	Australian and International Pilots Association
ANZAM	Australian and New Zealand Aviation Market
ANZCERTA	Australia-New Zealand Closer Economic Relations Trade Agreement
ANZSIC	Australian and New Zealand Standard Industrial Classification
APEC	Asia-Pacific Economic Cooperation
ASA	Air Services Arrangements
ASC	Airport Scheduling Committees
ASEAN	Association of South-East Asian Nations
ASG	Air Services Group
ASU	Australian Services Union
AWSCOT	Aviation Working Group of the Standing Committee on Transport
BA	British Airways
BIMP-EAGA	Brunei, Indonesia, Malaysia and the Philippines East Asian Growth Area
BTCE	Bureau of Transport and Communications Economics
BTR	Bureau of Tourism Research
CAA	Civil Aviation Authority
CASA	Civil Aviation Safety Authority
CER	Closer Economic Relations
CPA	Competition Principles Agreement
CRS	Computer Reservation System
DFAT	Department of Foreign Affairs and Trade
DIST	Department of Industry, Science and Tourism
DOT	United States Department of Transportation
DTC	Department of Transport and Communications
DTRD	Department of Transport and Regional Development
EC	European Commission
EFTA	European Free Trade Association
EU	European Union
FAA	Federal Aviation Authority
FAC	Federal Airport Corporation
FTK	Freight tonne-kilometre

GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
HHI	Herfindahl-Hirschman Indices
HRSC	House of Representatives Standing Committee
IAC	Industries Assistance Commission
IASC	International Air Services Commission
IASTA	International Air Services Transit Agreement 1945
IATA	International Air Transport Association
IC	Industry Commission
ICAO	International Civil Aviation Organization
IMF	International Monetary Fund
JAL	Japan Airlines
KAL	Korean Airlines
KLM	KLM Royal Dutch Airlines
MFN	Most favoured nation
MOU	Memorandum of Understanding
MTOW	Maximum take-off weight
na	Not applicable
NCC	National Competition Council
OECD	Organisation for Economic Co-operation and Development
ONT	Office of National Tourism
PC	Productivity Commission
PSA	Prices Surveillance Authority
RPK	Revenue passenger-kilometre
SAA	Standards Association of Australia
SAM	Single Aviation Market
sub	submission
TAG	Tourism Aviation Group
TKP	tonne-kilometre performed
TPA	Trade Practices Act
TTF	Tourism Task Force
UK	United Kingdom
US	United States
WTO	World Trade Organization

Glossary

Air Services Agreement	An agreement with formal treaty status between governments regulating the conduct of trade in international air services. It consists of a series of articles (or provisions)
air services arrangements (ASAs)	A set of arrangements that regulate the operation of international air services between two countries. These arrangements usually comprise an Air Services Agreement, any Memoranda of Understanding and any exchanges of letters and/or notes
alliance	An agreement between airlines to cooperate in the provision or operation of some of their services on a route, or on a regional or global basis
available seat kilometres	The total number of seats offered multiplied by the distance flown, used as a measure of air transport passenger capacity
beyond rights	The right of a carrier from one country to fly to another country then beyond to a third country (a form of fifth freedom rights)
bilateral agreements	<i>See</i> air services arrangements
blocked space agreement	The purchase by one carrier of a block of seats from another carrier for resale to passengers directly
break of gauge	Change of aircraft, at an en-route point on an international flight outside the home territory of the airline, to (on an outbound trip) or from (on an inbound trip) another aircraft having a smaller capacity
cabotage	Provision of commercial domestic air services within a country. Cabotage rights are classified as either

consecutive cabotage — the right of foreign-owned airline(s) to fly a domestic flight stage within the host country as a continuation of an international service (also known as eighth freedom) — or standalone cabotage — the unrestricted right of foreign-owned airline(s) to provide domestic air services in the host country (also known as ninth freedom)

capacity allocation	The allocation of rights to individual airlines to fly services available under ASAs
change of gauge	<i>See break of gauge</i>
charter services	<i>See non-scheduled services</i>
city pair	An air route between two cities
city designation	The designation of air services to particular cities, or a choice of cities specified under an ASA
codesharing	The assignment of one airline's designator code (for example, 'QF' for Qantas) to a flight operated by another airline
computer reservation system	A computerised system which provides information to subscribers (usually travel agents) on airline schedules, fares and seat availability. It is used to make reservations and issue tickets for passengers
dedicated freight aircraft	An aircraft set up to transport freight only
double disapproval	Arrangements in bilateral air service agreements whereby proposed fares can be disallowed only if rejected by both contracting countries
economies of network size	The fall in average unit costs as the number of routes (network) increases
economies of scale	The fall in average unit costs as airline output increases
economies of scope	The fall in the average unit costs of two or more services

	that results when they are produced by one airline rather than separately produced by different airlines
economies of traffic density	The fall in average unit costs as the number of passengers travelling on a particular route(s) increases
flag carrier	A country's national airline. Countries with only a government-owned airline often identify the airline as the national or flag carrier
freedoms of the air	Types of international aviation rights established under ASAs (see Box 3.1 for details on types of freedoms)
freight-tonne kilometres	A metric tonne of freight or mail carried one kilometre
'grandfather' rights	The allocation of airport landing and take-off slots based on the past and/or current allocation
hub and spoke network	A network of routes operating through a central hub point. Airlines may channel and increase traffic through hub points, thereby creating economies of traffic density
interlining	Carriage of passengers and/or freight by one airline on behalf of another airline, based on a formal arrangement (an interline agreement) between the airlines which involves the coordination of baggage checks, carriage or air cargo, for example, and the honouring of tickets between airlines. The identity of each carrier is maintained
intermediate rights	The right of a carrier from one country to fly to another country via a third country (a form of fifth freedom rights)
landing and take-off slots	A landing and/or take-off time at an airport
load factor	The number of passengers carried as a percentage of the number of seats available
Memorandum of Understanding	An agreement between two parties. With regard to ASA's, it is a less formal type of agreement that may be as binding as a formal agreement and may cover scheduled and/or non-scheduled international air services

multilateral (agreement)	A trade agreement that encompasses a large number of countries
multiple designation	A country's policy of permitting more than one airline to operate scheduled international air services between it and other destinations
non-scheduled airline	Any air transport enterprise only offering air transport services to the public that are not performed according to a regular timetable
non-scheduled services	Flights performed for remuneration on an irregular basis. [Both scheduled and non-scheduled airlines provide non-scheduled services.] Usually referred to charter services and can apply to either passengers or freight
'open skies' agreement	An agreement to remove restrictions on the ability of airlines to operate services between two countries
origin–destination traffic	A measure of airline (passenger) traffic between the commencement point of an air passenger's journey and the end point of the journey, as distinguished from uplift–discharge traffic
own stopover rights	<i>See stopover rights</i>
plurilateral (agreement)	A trade agreement, not necessarily confined to a geographic region, between more than two countries, but not so many as to make it “multilateral”
'regional ring-fence'	A ring-fenced regional slot pool at Sydney Airport where 30 per cent of the airport's peak capacity slots are held by regional airlines. Swapping of these slots is not permitted for other categories of operation
revenue passenger kilometres	The number of paying passengers on an aircraft multiplied by the number of kilometres flown, used as a measure of air passenger travel services
revenue pooling	An agreement between airlines to share all revenue on a route or sector irrespective of the revenue generated by

	each individual airline on the route
route	At its simplest level, an air service between two points (usually cities)
scheduled airline	Any air transport enterprise offering or operating a regular air service according to a published timetable (although many also operate non-scheduled services)
scheduled services	Flights listed in a published timetable (or that are so regular and frequent as to constitute a recognisably systematic series) and performed for remuneration
single aviation market	Two or more countries that have a formal agreement that treats the countries as if they were one
single designation	A country's policy of permitting only one airline to operate scheduled international air services between it and other destinations
stage length	The distance flown between take-off and landing
stopover rights	The right of a carrier from one country to carry its own international passengers between two points within another country
substantial ownership	All or majority ownership of an airline by citizens in the country of registration. There is no internationally agreed standard, so each country can determine what it accepts as substantial ownership
tariff	Passenger airfare and/or cargo rate
terminal slot	A gate at an airport terminal for alighting and boarding of passengers and/or freight at a specified time
thin route	Route over which traffic and frequency is low
tonne kilometres available	A measure of tonnes available for the carriage of freight, mail and passengers, multiplied by the distance flown. A measure of tonnage capacity, it can be for a single flight, an airline or industry wide. Cost per tonne kilometres

available is often used as a measure of airline efficiency

tonne kilometres performed	A measure of tonnes of freight, mail and passengers actually carried, multiplied by the distance flown. It may be measured for a single flight, an airline or industry wide
uplift–discharge traffic	An airline’s (passenger) traffic between the points of landing and take-off, as distinguished from origin–destination traffic
undertaking	The terms and conditions under which an airport owner will provide access, as agreed with the Australian Competition and Consumer Commission
yield	Airline revenue per unit of traffic. Passenger yield is airline revenue per passenger kilometre
yield management	Manipulation of prices to attempt to obtain the most revenue from each flight. Yield management systems are based on estimating the number of full fare tickets that would be sold on a particular flight, then offering the remaining tickets at varying discounts to induce demand from more price-sensitive passengers. The discounted tickets generally have conditions so they are less attractive to those passengers who are willing to pay full fare

OVERVIEW

KEY MESSAGES

- The 50-year old bilateral system is unable to cope with the ever growing demands for international air services.
- The system's constraints hurt airlines and their users — travellers and the tourism and air freight industries.
- The Australian Government, like many others, has been loosening the restraints, but not fast enough.
- Unilateral 'open skies' are not the solution for Australia.
- The Commission recommends a policy of *reciprocal* 'open skies':
 - bilaterally;
 - plurilaterally; and
 - multilaterally.
- Safety should not be compromised.
- Special measures should be introduced to increase the scope for international air services for regional Australia.
- More transparent and consultative processes are needed in developing Australia's international air services negotiating framework.
- The International Air Services Commission should continue, but its role and processes should be streamlined and simplified.
- An independent inquiry into airport capacity and use is needed.

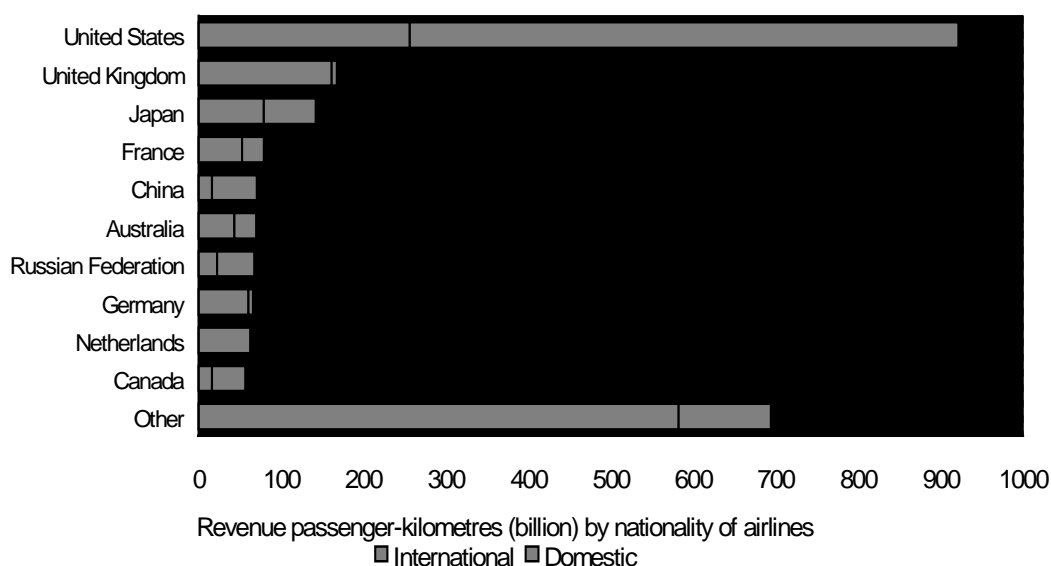
ASAs regulate production and trade in international air services...

For over half a century, international civil aviation has been governed by a system of bilateral air service arrangements (ASAs) between countries. There are now some 3000 ASAs worldwide, 51 involving Australia.

ASAs set out the terms and conditions under which airlines can fly. Typically they specify capacity, frequency, routes, cities, ownership provisions, safety certification, price approval processes, and many other details.

Australia's place in world aviation

Australian airlines were the sixth largest in the world in 1996 in terms of revenue passenger kilometres. They carried around 43 per cent of the approximately 14 million passengers flown to and from Australia in 1997 — Qantas having a 39 per cent share and Ansett International having around 4 per cent.



Australia's international airlines have shared in the rapid growth of international passenger and freight traffic, with average annual growth rates of 8.1 per cent and 7.8 per cent respectively between 1986 and 1996. These growth rates, while still rapid in absolute terms, are marginally lower than the global average and that achieved by airlines of North America and the Asia-Pacific.

which is much more restricted than trade in goods...

Unlike trade in goods, which is generally free unless specifically restricted, trade in international air services cannot occur unless it is explicitly permitted in ASAs. Various 'freedoms of the air' allow airlines to fly to, from, beyond, and between bilateral partners and other countries. Other 'positive' provisions of ASAs allow for them to undertake specific activities, such as setting up an office, in the foreign bilateral partner country.

Restrictions on trade in goods are generally applied uniformly to all trading partners that are members of the World Trade Organization (WTO). In contrast, trade in international air services is regulated within an

<i>Anti-competitive restrictions are rife in ASAs ...</i>	<p>international framework of bilateral agreements. It is not subject to the most favoured nation principle. International air services are also largely excluded from the WTO's General Agreement on Trade in Services (GATS).</p> <p>Tight ASA restrictions on competition and trade have turned the international airline industry into one of the most regulated in the world. Airlines have attempted to overcome some of the bilateral system's constraints on their operations by entering into various arrangements, such as codeshares and alliances.</p>
<i>but many countries have been liberalising their arrangements.</i>	<p>As evidence mounts of the inefficiencies flowing from anticompetitive regulation of airlines, many countries have been liberalising economic regulation. Driven by the United States, bilateral 'open skies' agreements, which remove most traffic and market access constraints on a reciprocal basis, are spreading. Such policies commonly remove constraints on capacity, frequency, city designation, routes, intermediate and beyond rights, and tariff setting.</p> <p>New Zealand is also prepared, within a bilateral reciprocal arrangement, to remove the requirement for national ownership of designated carriers, and to negotiate on cabotage (domestic carriage) and the rights for airlines to operate international air services between other countries without returning home. The United States has now signed 30 bilateral 'open skies' ASAs; New Zealand has signed six.</p>
<i>The bilateral system is under pressure.</i>	<p>The bilateral system is coming under intense pressure. While it is capable of accommodating more liberal regulatory arrangements, major changes are proving difficult to achieve through existing institutions such as the International Civil Aviation Organization (ICAO) and the WTO. The APEC commitment to achieving free and open trade and investment for industrialised economies by 2010, and for developing economies by 2020, may have important implications, but so far little interest has been shown in applying the general APEC commitments to air services.</p>

Pressures on the bilateral system

- Strong growth in air services is revealing the inflexibilities and inefficiencies of the system.
- Evidence from around the world of the benefits of aviation deregulation.
- The spread of bilateral 'open skies' policies.
- Consumer and business demands for better and seamless air services.
- The use of codeshares, alliances and charters to overcome constraints of the bilateral structure.
- The low profits of most airlines and the growing reluctance of governments to continue subsidising their airlines.
- The pressure of global capital markets on airlines to improve performance.
- Privatisation of airlines and airports.
- The emergence of regional or plurilateral agreements, particularly developments in the European Union.

World trade in most other goods and services is being liberalised in a multilateral framework, producing demonstrable gains in economic welfare. A different system for international air services is increasingly difficult to justify.

Australia has reformed its aviation industry in the past decade.

Over the past decade, Australian Governments have embraced reform of Australia's aviation policy. Australian aviation and the airline industry have been transformed. The two airline policy has been terminated, Qantas and Australian Airlines have merged and been privatised, multiple designation of airlines has been introduced and Ansett has become an international airline. Australia and New Zealand have implemented a Single Aviation Market (with no restrictions on trans-Tasman flights or cabotage) and most airports have been privatised.

Competition has increased...

Economic deregulation has been substantial, without compromising effective safety regulation. Competition has increased with more liberal ASAs, the entry of Ansett International and a growing number of third country competitors. Greater competition has reduced airfares and increased the frequency, variety and quality of services, to

the benefit of consumers.

*with benefits for
Australia.*

Results of the Commission's modelling of the effects of greater competition on a number of Asian routes following the entry of Ansett International show significant economic welfare gains for Australia and for the other countries served. Model estimates are that in 1997, for example, competition from Ansett reduced fares between Australia and Hong Kong by almost 7 per cent and increased traffic by over 5 per cent.

On the Asian routes served by Ansett, model estimates are that Australian consumers benefited by nearly \$90 million in 1997, although Australian airlines' profits are estimated to have been reduced by almost \$58 million, providing a net increase in economic welfare of over \$32 million.

*Progress is time
consuming and
complex...*

The Australian Government has pursued a policy of liberalisation of bilateral arrangements with other countries. The Department of Transport and Regional Development has been negotiating extra capacity ahead of actual demand and expanded market and network opportunities. Agreements are being negotiated with more countries and the range of traffic and market access rights is increasing. Australia has introduced multiple designation of its airlines in all but seven of its 51 ASAs. But this is a time-consuming and complex process, some negotiations taking several years to complete.

and constraints remain inherent in agreements.

Despite liberalisation in many countries, most ASAs, including Australia's, still prevent airlines from operating like other companies. They are restricted in developing efficient networks and innovative travel products.

One reason for the slow progress of reform lies in the ASAs themselves. The 'positive list' of activities that an airline is allowed inhibits airlines from undertaking anything for which there is no specific provision.

Airlines often require their governments to intercede for them before they can develop new or expanded services. In most other areas, international traders are able to do anything that is not constrained by a 'negative list' of specific restrictions. This gives companies much greater freedom to do business, and importantly, to grow and innovate.

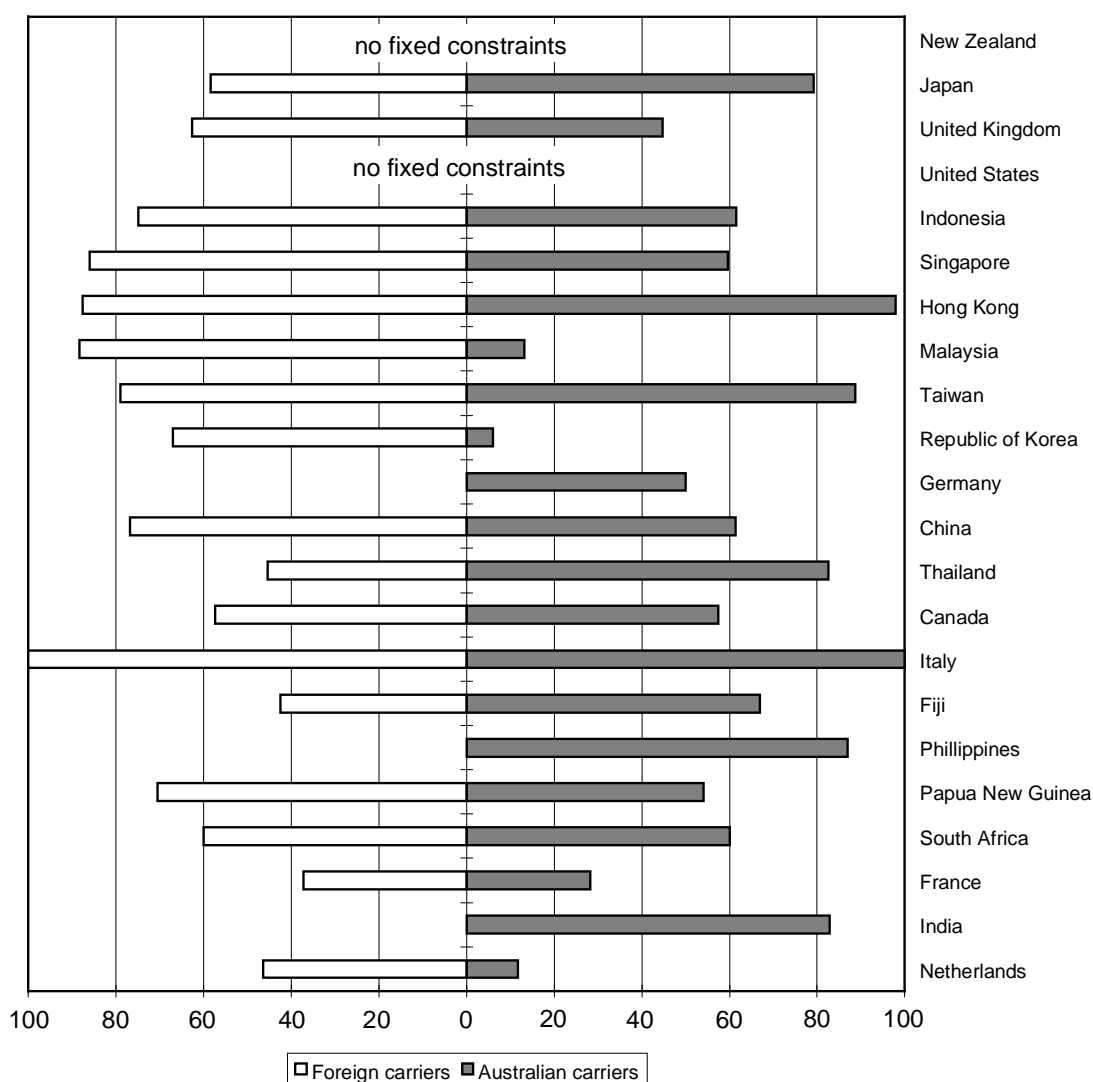
They stunt growth of aviation and tourism.

Capacity is used as negotiating coin and is still restricted in most bilateral agreements. Some of Australia's most highly trafficked routes have reached or are approaching full capacity use, despite the recent reduction of demand on most Asian routes.

Capacity constraints are credible only if they are binding, or potentially binding. They can inhibit the growth of the market, the airlines of the countries concerned, and downstream industries such as tourism. If third country carriers have capacity on such constrained routes, consumers and tourists may not be greatly disadvantaged, although prices are likely to be higher and choice constrained. The airlines of the bilateral partners may lose market share if they are restrained by capacity limits from providing extra services to meet growing demand.

While the Australian Government's policy has been to negotiate capacity 'ahead of demand', this approach is inherently arbitrary. It is based on assumptions about airline operations in each country, prices and determinants of demand which may change at short notice, or may not be justified. In the Commission's view, the removal of restrictions on capacity in ASAs should be a high priority.

Australian and foreign capacity used as a percentage of negotiated capacity, top 22 countries, 30 June 1998



Notes: Units are percentages. For detailed notes see Figure 5.2

The current bilateral system reduces the efficiency of the aviation industry worldwide,...

The bilateral system restricts airlines' ownership and access to capital, where they fly, the number and frequency of flights, the number of seats they can offer, what types of aircraft they use, and how much they charge. It influences the nature of competition between airlines by controlling market entry and the quantity and variety of rights allocated to particular airlines.

The system also influences airline costs — usually increasing costs by restricting airlines' ability to operate efficiently, develop new markets and more effective networks. Increased costs and restricted competition lead to higher prices.

hurts consumers, the tourism industry and the wider economy,...

Regulation of entry, frequency, capacity, routes and prices keeps fares up and impedes the development of new travel products. Liberalisation has already led to greater competition, reduced fares, new routes and destinations, and improved quality of service, but there is considerable scope for further improvements.

Higher international airfares restrict growth in the Australian tourism industry. Modelling estimates suggest that lower fares resulting from Ansett International's entry on seven Asian routes may have increased net passenger movements to Australia by almost 4 percent in 1997. Inbound foreign tourists outnumber outbound Australian holiday-makers by two to one.

affects regional Australia,...

Restrictions on city designation and capacity limitations combine to make it costly for foreign airlines to land at secondary gateways, impeding tourism development and the availability of international air freight capacity in regional Australia. Where a choice has to be made between Sydney and regional gateways, Sydney is chosen.

The bilateral system has been built on the premise that each country has its own substantially owned and controlled designated national flag carrier(s). The result is an international misallocation of resources as some countries waste precious capital and other resources on inefficient airlines that would not be viable without government support.

and stifles growth of efficient airlines.

The more efficient industries suffer, both from having to compete for capital and other resources and from having to use expensive international air transport. Conversely, those countries with economically efficient airline industries are unable to expand their airlines to their full potential.

Australia could be disadvantaged.

The global aviation industry has reached a critical point in its development. The inefficiencies imposed on the world aviation industry by the current bilateral system and the benefits of more efficient, internationally competitive air services are now apparent. Reciprocal ‘open skies’ agreements are spreading. If Australia does not move rapidly, the rest of the world could liberalise around it. Australia would be disadvantaged if air transport services between other countries become relatively more efficient. And Australian carriers would be disadvantaged in their pursuit of new and larger international markets if other markets liberalised ahead of ours.

This inquiry assesses current arrangements and prospects for liberalisation.

The Commission has been asked to identify and evaluate the costs and benefits of current arrangements which restrict competition and trade in international air services and options for further liberalisation, both within and outside the bilateral framework. This inquiry is also part of the Commonwealth’s review of legislation under the Competition Principles Agreement.

The Commission has looked mainly at the *economic* regulation of international air services, rather than technical regulations governing the conduct, safety and security of aviation. However, it has given consideration to possible safety implications of economic liberalisation.

Australia’s aviation objectives are not clear.

The current objectives of Australia’s international aviation policy are not clearly stated. After a decade of reform, it has been difficult for the Commission to piece them together from a variety of Government documents. The Australian Government should publish and keep up to date a statement of its aviation policy.

Efficiency and competitiveness must improve.

If Australia is to develop the full potential of trade in international air services to enhance Australian economic welfare, it must enhance the efficiency and international competitiveness of airlines serving Australia (both Australian and foreign). Australian consumers, industries and regions that depend on international air services (such as tourism) would all benefit.

National designation must continue...

Of all of the bilateral system's constraints on efficiency and competition, probably the most fundamental is the requirement that national flag carriers be locally owned and controlled. Reform of national designation is critical for liberalisation of the bilateral system but options are limited. If an individual country changes the criteria for designation of its airlines unilaterally, other countries may refuse them access. National designation is required to ensure that safety and technical standards of airlines are effectively regulated, but local ownership is not.

but it does not require national ownership.

Designation should be based on a less restrictive test that does not require ownership by nationals. With the Asian financial crisis focusing attention on the need for capital to be used more efficiently in the airline industry, it may be opportune to try again to achieve multilateral agreement to liberalisation of the ownership and control requirements.

ICAO should reconsider designation.

The Australian Government should join with other like-minded governments to push for reconsideration of this issue by ICAO and APEC. In the meantime, Australia should negotiate with its bilateral partners to incorporate in its own ASAs more liberal means of designating airlines which do not rely on ownership restrictions.

The Australian Government should join with other like-minded governments to have the ICAO Secretariat's 1994 proposals to liberalise ownership and control requirements for national designation reconsidered for adoption on a plurilateral or multilateral basis.

In the meantime, Australia's ASAs should incorporate more liberal means of designating airlines which do not rely on ownership restrictions.

We could start with a regional designation arrangement.

Australia could also invite neighbouring countries to develop, and seek ICAO recognition of, a regional approach to designation. New Zealand would seem an obvious place to start, particularly as the Australia New Zealand Single Aviation Market (SAM) already includes a more liberal approach to ownership and control. An obstacle could be the differences in approach which now exist between Australia and New Zealand in their international aviation policies. However, if the recommendations outlined in this report were to be adopted, the policies of the two countries would be more closely aligned. Another option would be a wider South Pacific regional grouping for designation.

Liberalisation of the basic framework is fundamental.

Options for incremental improvements to the status quo have been considered, but such changes would not go far enough. The Commission has examined several options for more extensive liberalisation of the international air services framework. Concerted action is also required internationally. Australia has played important roles in such international negotiations in the past (for example, the Cairns Group). It is time for Australia to do so again.

Options for liberalisation of air services

- Unilateral ‘open skies’; and
- Reciprocal liberalisation:
 - Bilateral;
 - Plurilateral open club; and
 - Multilateral liberalisation through the WTO.

Unilateral trade liberalisation has benefited Australia in the past...

As a small country with limited bargaining power, it has been in Australia’s best interests generally to liberalise unilaterally. The Commission has examined the case for Australia extending this approach to international air services through unilateral ‘open skies’. But under the entrenched bilateral system Australia cannot produce, let alone trade, international air services without the approval of other countries. Unilateral liberalisation of scheduled international passenger

services would not ensure that competition and the quantity and quality of air services would increase, or that airfares would fall. Other countries could still restrict entry and capacity.

Australia's airlines could have their rights in foreign markets frozen, and would be unable to expand as markets grew. Consumers who would have preferred to use Australian airlines, but are not able to do so, would bear the costs of having to use less efficient or less preferred carriers.

but with the bilateral system entrenched, unilateral 'open skies' is not the solution.

Accordingly, the Commission has concluded that, as long as the rest of the world remains committed to the bilateral system, a policy of unilateral open skies could make Australia worse off than if it continued to negotiate additional capacity with bilateral partners.

The Commission does *not* recommend unilateral 'open skies' for Australia.

Reciprocal liberalisation is a better approach.

Because of the bilateral system regulating international air services, Australia enjoys considerable bargaining power which is not available for most of our other international trade. Also Australia is quite a large country in aviation terms. Much can therefore be achieved by liberalising on a reciprocal basis with other countries, bilaterally, plurilaterally and eventually, multilaterally.

Moving from a 'positive list' of restrictions in agreements to a 'negative list' — all forms of trading would be allowed unless explicitly restricted — would provide a better basis both for liberalisation and for incorporation of air services into the wider multilateral trade negotiating framework.

Reciprocal bilateral 'open skies' would widen opportunities for airlines and users...

A bilateral reciprocal 'open skies' policy which removes restrictions on access to each country's markets, including unlimited rights to intermediate and beyond points, would loosen the regulatory corset which now constricts airline growth. Airlines would be able to respond quickly to market opportunities and pressures. While the airlines could be expected to face greater competitive pressure, they would also be better able to reduce their costs and develop their markets.

Consumers and other users would benefit from greater capacity and frequency, expanded networks, innovative travel products and competitive fares. The costs to governments and airlines of maintaining agreements would be reduced.

and remove most traffic and access constraints.

The Commission recommends that Australia should seek to negotiate *reciprocal* 'open skies' agreements on a bilateral basis which would remove restrictions on:

- capacity and frequency to, from, between and beyond Australia and the bilateral aviation partner;
- codesharing on each other's airlines;
- routes including points of access to the Australian and the bilateral partner's markets, intermediate and beyond points;
- multiple designation of airlines by Australia and the bilateral partner;
- ownership as a basis for airline designation; and
- prices.

Such reciprocal agreements should also contain restrictions on government subsidies where these are significant. Australia should also be prepared to negotiate, on a case by case basis, removal of restrictions on cabotage and the development of 'stand alone' services between the bilateral partners and third countries (so called seventh freedom services).

Achieving the best results from bilateral reciprocal 'open skies' agreements will require careful attention to the

<i>Where that is not feasible, we should liberalise ASAs as much as possible.</i>	<p>strategic sequencing of negotiations with various countries.</p> <p>A number of countries may not be prepared to liberalise their ASAs with Australia to the extent of negotiating bilateral reciprocal ‘open skies’ agreements. Australia’s strategy in such cases should be to renegotiate ASAs to incorporate as much of the above package as possible.</p>
<i>Concerted international action is still required.</i>	<p>But bilateral liberalisation can only go so far. It would not be sufficient to permit the full development of global airline networks. A concerted international effort is needed.</p> <p>A group of like-minded nations led by Australia could develop an open club based on a common ‘open skies’ agreement. This would allow all carriers within the group to fly freely among the members, subject to a common set of rules. The agreement would best be couched as a ‘negative list’ of remaining restrictions. It should be open to other countries to join on the same conditions.</p>
<i>Australia should initiate a reciprocal ‘open skies’ club.</i>	<p>A regional approach which was closed to non-members may encourage competition within the group at the expense of market access for non-members. The challenge would be to ensure that regional or plurilateral agreements were used as a stepping stone to global liberalisation, not as an exclusive device to favour members. Openness is an important feature of such agreements.</p> <p>A common agreement would be simpler than the complex set of reciprocal bilateral agreements it would replace. Progress towards an open club could be achieved by negotiating separately similar liberal bilateral agreements among a series of partners, but this is likely to be too time consuming and complex to achieve results comparable to those of a single plurilateral agreement.</p>

The larger the club, the greater the benefits of membership and the greater the costs of being left out.

The benefits to members would grow in proportion to the size of the network, while the opportunity costs of not joining also would grow. Non-members would risk becoming isolated from the increase in air traffic in response to the more liberal conditions available within the club. Countries that may be reluctant to negotiate reciprocal ‘open skies’ agreements on a bilateral basis may have little choice but to join the club.

To enhance the chances of this plurilateral open club becoming a vehicle for widespread reform, it should:

Features of an open club.

- not intentionally disadvantage outsiders any more than the bilateral agreements it replaces;
- have transparent rules;
- allow non-members to join on the same terms and conditions; and
- contain provisions relating to competition policy, particularly to constrain significant government subsidies to airlines.

A liberal agreement under the WTO should be the ultimate objective.

Ultimately, a liberal multilateral agreement under the WTO which covers all or most countries would allow international air services to develop in response to market pressures. Efficient carriers would replace inefficient carriers, and the removal of regulatory barriers to entry would enhance competition. It would be easier to administer and comply with than the current bilateral system.

Given the entrenched position of the bilateral system, and the difficulties of negotiating a truly liberal multilateral agreement, reciprocal bilateral and plurilateral liberalisation options may offer the best prospects for achieving gains in the short to medium term. However, the history of the International Telecommunications Agreement illustrates that nations can move quickly to achieve a multilateral and liberal agreement when they realise the advantages.

*Discussion
should start in
the WTO.*

Australia could lend its support for the eventual inclusion of air transport services in the GATS. The Commission recommends that prior to the review of the GATS in 2000, the Australian Government promote discussion among WTO members to determine a process for including all air services in the GATS.

*In addition, a
package of
reforms to
benefit regional
Australia could
be implemented
immediately...*

Restrictions on the number and identity of Australian cities available to foreign airlines can limit the potential for tourism and regional development outside Sydney. Enabling foreign airlines to serve a wider range of destinations, both on their own and through codeshares with Australian airlines, could encourage them to market a wider range of Australian destinations. Easing these restrictions could provide better services to secondary gateways and stimulate tourism growth to the rest of Australia.

The Commission recommends a package of bilateral reciprocal and unilateral measures to improve international air services to regional Australia.

*to remove
restrictions at
secondary
airports on a
reciprocal
basis...*

Australia should follow the lead of the United Kingdom and offer bilateral partners unlimited capacity to all Australian international airports except Sydney, provided that they offer the same rights in return. This would provide extra capacity of a reciprocal, route-by-route basis (for example, Melbourne to Milan, Adelaide to Stanstead or Darwin to Kuching), outside the capacity entitlements already negotiated in ASAs. This would help to reduce the opportunity costs of foreign airlines operating to regional areas. It would also provide niche opportunities for Australian airlines to provide more diverse services. The Commission recommends that this offer be made immediately.

*and improve
access
unilaterally.*

There is also scope for unilateral (unreciprocated) action. The Commission recommends that the Australian Government unilaterally remove restrictions on foreign airlines' access to secondary international airports (airports other than Sydney, Melbourne, Brisbane and Perth). Foreign airlines would still have to service these cities within negotiated capacity, but would have greater

freedom in developing their Australian routes.

*Meanwhile,
Australia should
use its airports
more efficiently...*

This will not guarantee the start-up of services, but, along with domestic codesharing and less restricted own-stopover rights, could facilitate the development of new and more innovative air services to regional Australia. Regional economies and the tourism industry could benefit, at little cost to Australian airlines.

Access to efficient airport infrastructure is essential for efficient international air services. Much has been done to reform Australian airports, but there is still significant scope to increase efficiency through greater use of market mechanisms.

Larger peak/off-peak price differentials for landing and taking-off at capacity constrained airports would help to allocate scarce airport infrastructure more efficiently. Such pricing could even mean lower off-peak charges and would reduce the need for new investment that is largely required only for peak periods.

Recent changes to the operating and charging systems at Sydney have reduced the scope for market mechanisms to allocate scarce facilities at peak periods more efficiently. Peak load pricing can easily operate in conjunction with an airport slot management system, including the reservation of slots for regional airlines.

There is also an in-principle argument in favour of developing a formal market for landing and take-off slots and terminal facilities, where capacity is a problem.

The Commission considers that there are a number of issues relating to airport capacity, use, charges and access which need further examination. It recommends that an inquiry be held in conjunction with the review of the price cap arrangements that is scheduled to be completed in 2001. The review should examine overall airport capacity as well as management of capacity.

improve DTRD's processes, and...

During this inquiry, it became apparent that many involved with international aviation in Australia did not realise the extent to which Australia's international aviation policy has been liberalised already. Those affected by international air services — such as State and local governments, airports, the tourism and other user industries — should be working more closely with DTRD to improve Australia's international air services. The Commission recommends measures to improve DTRD's consultation processes and the transparency of policy.

streamline guidelines and processes of the IASC.

Multiple designation has achieved significant benefits in opening up a number of routes to greater competition. The International Air Services Commission has played a significant role, but its processes and guidelines could be streamlined and simplified to provide a more certain environment for airlines and lower administration and compliance costs. The Commission recommends measures to achieve this.

But safety should not be compromised.

Australia should continue to support international efforts through ICAO and other bodies to improve safety and security on aircraft. Australia's bilateral agreements should also provide for enhanced safety accreditation processes where the mutual recognition of safety certification appears to be inadequate. Evidence presented to this Inquiry has not convinced the Commission that economic deregulation need lead to lower safety standards.

RECOMMENDATIONS

Further liberalisation

Recommendation 9.3

The Commission recommends that Australia should seek to negotiate reciprocal ‘open skies’ agreements on a bilateral basis which would remove restrictions on:

- capacity and frequency to, from, between and beyond Australia and the bilateral aviation partner;
- codesharing on each other’s airlines;
- routes, including points of access to the Australian and the bilateral partner’s markets, intermediate and beyond points;
- multiple designation of airlines by Australia and the bilateral partner;
- ownership as a basis for airline designation; and
- prices.

Such reciprocal agreements should also contain restrictions on government subsidies where these are significant. Australia should also be prepared to negotiate, on a case by case basis, removal of restrictions on cabotage and the development of ‘stand alone’ services between the bilateral partners and third countries (so called seventh freedom services).

Recommendation 9.5

Australia should invite like-minded countries to discuss the formation of an open club of nations committed to liberalising international aviation through a common plurilateral ‘open skies’ agreement.

Recommendation 9.6

The Australian Government should promote discussion within the WTO membership to determine a process for including all air services in the GATS.

Recommendation 9.1

The Australian Government should join with other like-minded governments to have the ICAO Secretariat’s 1994 proposals to liberalise

ownership and control requirements for national designation reconsidered for adoption on a plurilateral or multilateral basis.

In the meantime, Australia's own ASAs should be negotiated to incorporate a more liberal means of designating airlines which does not rely on ownership restrictions.

Recommendation 9.2

The Australian Government should invite neighbouring countries to develop, and seek ICAO recognition for, a regional arrangement which would enable relaxation of ownership and control criteria. Countries to be considered should include New Zealand and the South Pacific Forum island nations.

A regional reform package

Recommendation 9.4

As a step towards the further liberalisation of international air services, the Commission recommends reforms to ASAs to benefit regional Australia, encompassing both bilateral and unilateral elements:

Bilaterally, Australia should offer unlimited capacity to fly to all airports other than Sydney, provided that Australian carriers are offered the same routes on a reciprocal basis by their bilateral partners. The Australian Government should take up the British offer of similar opportunities.

Unilaterally, Australia should offer, within negotiated capacity:

- removal of restrictions on the number of points to be served and designation of all cities in Australia other than Sydney, Melbourne, Brisbane and Perth;
- unrestricted rights for foreign airlines to codeshare to all points in Australia on Australian domestic airlines; and
- unrestricted rights for foreign airlines to carry their own-stopover traffic.

International Air Services Commission

Recommendation 7.1

Contested capacity should continue to be allocated by the IASC using a public benefit test.

Recommendation 7.2

The objectives of the *International Air Services Commission Act 1992* should be amended to:

‘enhance the welfare of Australians by promoting economic efficiency through competition in the provision of international air services’.

Recommendation 7.3

The IASC should not be involved in assessing the viability of airlines, or anticipating approvals by other government agencies.

Recommendation 7.4

When international capacity becomes available, or is applied for, it should be advertised by DTRD.

Where an application for capacity is uncontested (that is, only one applicant), or capacity is not constrained, the allocation of that capacity should be approved automatically by DTRD.

It should be the responsibility of the airline to meet all other regulatory and financial requirements before the commencement date.

Where an application is contested, the IASC should determine the allocation of capacity.

Recommendation 7.5

Submissions should not be called for unless a contested allocation is referred to the IASC.

Recommendation 7.6

The criteria used by the IASC to allocate contested capacity should be simplified to focus on benefits from competition.

Recommendation 7.7

The start-up provisions should be removed from the Minister's policy statement.

Recommendation 7.8

Capacity allocations should be made in perpetuity and the IASC should be rigorous in enforcing the use-it-or-lose-it provisions.

Australia's aviation policy and processes

Recommendation 5.1

The Commonwealth Government should publish, and keep up to date, a statement of its aviation policy.

Recommendation 5.2

DTRD should develop a formal direct consultation process which encompasses *all* major interested parties to obtain their views on ASAs being negotiated and ensure that it provides timely and informative feedback on the outcomes of the ASA negotiation process.

Recommendation 5.3

An interdepartmental committee, chaired by DTRD, should be established to consider and endorse all proposals relating to Australia's air services negotiating position. The committee should include the Departments of Prime Minister and Cabinet, Treasury, Foreign Affairs and Trade, and Industry Science and Tourism.

Recommendation 5.4

Confidentiality of ASAs should be limited strictly to those parts of the arrangements specifically required by other governments. The reasons for granting confidentiality of ASAs should be scrutinised closely. All other arrangements should be made public and easily accessible.

Inquiry into airports

Recommendation 8.1

The Commonwealth Government should commission an inquiry into airport capacity, access and pricing in 2001. Such an inquiry should, at a minimum, examine:

- constraints that airports are imposing on Australia's air services;
- peak load pricing;
- regulation of aeronautical charges;
- the potential for the introduction of a market for slots; and
- legislated access provisions.

1 INTRODUCTION

International air services have developed within a complex web of regulations under the framework of the Chicago Convention of 1944. The guiding principles of this treaty are that each country has sovereignty over its own air space and should have the opportunity to develop its own national airline system.

Unlike most other forms of international trade and transport, which generally are free unless specifically restricted, international air transport cannot occur unless specifically authorised. This authorisation is accomplished through a system of bilateral air services arrangements (ASAs) which grant the right to various ‘freedoms of the air’ (Chapter 3).

There are over 3000 ASAs in operation worldwide, and Australia currently has 51 ASAs with its bilateral partners (DTRD sub. 33). The ASAs note in detail the rights of each partner. They may specify not only the amount of capacity allowed between the two countries, but also the frequency of flights, the type of aircraft, the number of airlines which can be designated to fly, routes and airports to be used, the intermediate and beyond points (and how they may be used), and tariff setting mechanisms. They define both the opportunity for, and the limits on, production and trade of international air services and competition in the industry.

1.1 This inquiry

The Commonwealth Government asked the Productivity Commission to examine the regulatory arrangements for Australia’s international air services, their effects and policy options for greater liberalisation. The terms of reference for the inquiry particularly direct the Commission to report on:

- the structure and objectives of the regulatory framework in which international air services operate;
- the effects of the bilateral air services agreement framework on competition in the global aviation market;
- the effects of the bilateral air services agreement framework on competition in Australia’s existing and potential international aviation markets;

- the effects of the International Air Services Commission (IASC) process of allocating capacity entitlements;
- the economy wide effects of the international aviation regulatory framework and Australia's approach to negotiating bilateral agreements;
- the sectoral effects on tourism, consumers, air freight and the aviation industry of the international aviation regulatory framework and Australia's approach to negotiating bilateral agreements; and
- the scope, costs, benefits and economy wide effects of options for liberalising and improving the current arrangements, both within and outside the bilateral system.

This inquiry stems from the Government's commitment — under the Competition Principles Agreement — to review legislation that restricts competition (Appendix B). Commonwealth, State and Territory governments in April 1995 agreed to broaden the scope of competition policy and extend it to previously exempt sectors of the economy. The inquiry is timely because Australia has significantly changed its international air services policy in recent years, including:

- allowing more than one Australian carrier in Australia's ASAs (multiple designation);
- relaxing restrictions on equity investment in Australian airlines;
- removing restrictions to allow Australian carriers to develop integrated domestic and international networks;
- corporatising and privatising airlines, aviation services and airports; and
- focusing on the interests of those affected by international air services, including consumers, tourism operators, trade and regional interests as well as the interests of Australian carriers.

The Australian and New Zealand governments implemented the Single Aviation Market to allow airlines of Australia and New Zealand to fly unrestricted within each other's country and across the Tasman.

Further, there have been many developments in the international air services market (such as the growth in global airline alliances) in the ten years since the last extensive public inquiry on these matters (IAC 1989). In welcoming the inquiry, a number of participants commented that it was appropriate given the changes to the environment in which air services are operating, particularly on a global basis.

1.2 The Productivity Commission's approach

This inquiry commenced at a time of transition for the Commission, as indicated in the terms of reference. The inquiry was sent to the Industry Commission under the *Industry Commission Act 1989*, pending parliamentary passage of Bills to abolish the Industry Commission and to create the new Productivity Commission. The *Productivity Commission Act 1998* came into force in April 1998, with the effect of changing the policy guidelines from those applying at the start of the inquiry (Box 1.1).

Box 1.1 Factors the Commission must consider

The Commission, in undertaking this Inquiry, is bound by the *Productivity Commission Act 1998* to have regard for the need:

- a) to improve the overall economic performance of the economy through higher productivity in the public and private sectors in order to achieve higher living standards for all members of the Australian community; and
- b) to reduce regulation of industry (including regulation by the States, Territories and local government) where this is consistent with the social and economic goals of the Commonwealth Government; and
- c) to encourage the development and growth of Australian industries that are efficient in their use of resources, enterprising, innovative and internationally competitive; and
- d) to facilitate adjustment to structural changes in the economy and the avoidance of social and economic hardships arising from those changes; and
- e) to recognise the interests of industries, employees, consumers and the community, likely to be affected by measures proposed by the Commission; and
- f) to increase employment, including in regional areas; and
- g) to promote regional development; and
- h) to recognise the progress made by Australia's trading partners in reducing both tariff and non-tariff barriers; and
- i) to ensure that industry develops in a way that is ecologically sustainable; and
- j) for Australia to meet its international obligations and commitments.

Source: Productivity Commission Act 1998.

The terms of reference for this inquiry were necessarily framed in the context of the Industry Commission's policy guidelines, but they partly foreshadowed the new legislation. They require evaluation not only of the economic effects of the

regulatory framework for international air services, including treaties, legislation and subordinate legislation, but also of the efficiency and effectiveness of various aspects of public administration.

The Commission's approach to this inquiry has been to accommodate the likely new requirements of the Productivity Commission Act at an early stage. The new Act retains key features of the Industry Commission, including its economy wide perspective, the powers of the Commission, the transparency of its processes and the ability to protect information supplied on a commercial-in-confidence basis. However, there are a number of differences. One relates to econometric modelling.

Procedures were introduced to provide for independent scrutiny of econometric modelling undertaken for this report in accordance with the Productivity Commission Act. During the inquiry the Commission held several seminars to explain its approach to the modelling and to seek comments from academics and industry. The model is discussed in Appendix F. This modelling could not have been undertaken without the support of the airline industry and the Department of Transport and Regional Development. An independent reference panel was appointed and the report of the reference panel is in Appendix G.

This inquiry is the Commission's first review of legislation under the Competition Principles Agreement. Thus, in addition to its own guidelines, the Commission must account for the agreement's requirements that legislation should not restrict competition unless it can be demonstrated that:

- the benefits of the restriction to the community as a whole outweigh the costs; and
- the objectives of the legislation can only be achieved by restricting competition.

The Competition Principles Agreement also states that without limiting the terms of reference of a review, the review should:

- clarify the objectives of the legislation;
- identify the nature of the restriction on competition;
- analyse the likely effect of the restriction on competition and on the economy generally;
- assess and balance the costs and benefits of the restriction; and
- consider alternative means for achieving the same result including non-legislative approaches.

The Commission's approach in this report reflects these various guidelines and criteria, although they may not always be distinguishable.

1.3 This report

The Commission has drawn on evidence from a range of sources, seeking input from those with an interest in and knowledge of the international air transport industry and its regulatory framework. On 18 June 1998 the Commission released a draft report, and invited comment on the draft recommendations contained in the report.

Over the life of the inquiry the Commission received 81 submissions from Commonwealth and State governments and agencies, airlines, airports, unions and Australian and international industry organisations. The Commission also held two sets of public hearings before and after the release of the draft report.

The Commission has benefited from visiting many interested parties around Australia for discussions. It also visited relevant international organisations, governments and airlines in Singapore, Switzerland, Belgium, the United Kingdom, the United States, Canada and New Zealand (Appendix A).

The Commission is pleased with the support for this inquiry from across the air transport and tourism sectors and from governments and their agencies. The Commission thanks participants for the effort, thoroughness and thoughtfulness of their submissions, and for their unstinting assistance and courtesy during the preparation of this report.

In this report, the Australian and world airline industries (Chapter 2) and the regulatory framework in which they operate (Chapter 3) are described. Chapter 4 examines the international trends towards liberalisation and recent changes to Australia's aviation policy, both domestically and internationally. The objectives of the Commonwealth Government's existing aviation policy (Chapter 5) are reviewed and the effects of the current regulatory system on the airline industry, consumers, user industries (such as tourism) and the economy as a whole are examined (Chapter 6).

The IASC and the allocation of capacity under multiple designation (Chapter 7), and access to airport infrastructure (Chapter 8) are considered. Options for reform and the Commission's recommendations are provided in Chapter 9.

2 THE AIRLINE INDUSTRY

The airline industry has grown rapidly, with world traffic more than trebling over the past two decades.¹ The industry is changing structurally as it grows. Where it was once composed predominantly of national flag carriers flying on a point-to-point basis, many airlines are now seeking to form alliances both as a way of overcoming some of the constraints of the regulatory system, and to develop global networks offering users a ‘seamless’ international service. Despite these changes the profitability of the worldwide industry generally has been poor.

It is against this background that the Australian air transport market has been through a dramatic transformation. Australia is on the rim of what has been the fastest growing region in world air transport and has shared in the rapid growth in international air traffic, with the number of overseas visitor arrivals to Australia nearly trebling over the past decade. The recent Asian downturn has curbed this growth to some extent, and is providing new challenges for Australian and Asian airlines to respond to changing market circumstances.

Significant liberalisation of Australia’s ASAs has led to increased competition on many routes into and out of Australia. This has occurred in a variety of ways, including multiple designation of airlines and the entry of third country carriers including those carrying passengers and freight from third countries to Australia via their own country.

This chapter examines the place of Australia’s airlines in the world aviation market place and the economic characteristics of the global aviation industry.

2.1 Australian airlines in the global airline industry

Approximately 1 200 airlines operate scheduled services worldwide, of which some 300 fly internationally (Hanlon 1996; OECD 1997). Almost every country in the world has its own national airline, with the United States having five of the eight largest airlines in terms of revenue. The largest, American Airlines,

¹ The main focus of this Inquiry is on scheduled international air services — that is, those that operate to a published timetable. However, non-scheduled services, which include charter services, are also considered. Airlines that operate scheduled services are referred to as scheduled airlines, although many also operate some non-scheduled services.

earned around \$US18.6 billion in revenue in 1997, carrying around 81 million passengers on 641 aircraft and employing 111 500 staff (Table 2.1).

Australia has five designated international airlines currently flying: Qantas, Ansett International², National Jet Systems, Asian Express and Flight West.

In 1997, Qantas operated a domestic and international fleet of 148 aircraft (Table 2.1) and flew to 29 countries (sub. 25, p. 3). Ansett International commenced international operations in September 1993 and was operating services to six Asian countries in March 1998 (sub. 42, p. 15). It operates a small fleet of aircraft in its own right, but also draws on aircraft operated by the affiliated domestic operator, Ansett Australia. Together the two Ansett companies operate a domestic and international fleet of 106 aircraft. National Jet Systems is the third international scheduled passenger airline to operate out of Australia in recent times. Predominantly a regional airline within the Australian domestic market, National Jet Systems started scheduled international services in January 1996 transporting passengers and freight between Australia (including Christmas Island) and Indonesia and Singapore. Asian Express operates a dedicated freight service to New Zealand, and Flight West recently gained approval to operate services to Papua New Guinea.

Qantas and the Ansett group are significant airlines on a world scale, ranking fifteenth and twenty-ninth respectively in terms of revenue in 1997 (Table 2.1). Qantas was the third largest airline — behind Japan Airlines and All Nippon Airways — in the Asia-Pacific region in 1997, while Ansett ranked ninth in the region (*Airline Business* 1998).³ They are also significant employers, with a combined workforce of over 47 000 people in 1997. In terms of full time equivalent persons, employment at Qantas has grown from 25 000 in 1992–93, the first year in which Qantas and Australian Airlines operated as a merged entity, to 30 000 in 1997.

² British Airways acquired a 25 per cent stake in Qantas from the Commonwealth Government in 1993. Qantas merged with Australian Airlines in that year. The Commonwealth sold its remaining share of Qantas by public float in July 1995. Ansett Holdings Limited, the holding company of the Ansett Australia group, is owned by Air New Zealand (50 per cent) and News Limited (50 per cent). Ansett Holdings owns 49 per cent of Ansett International, and via a joint venture company (International Airlines Investment Holdings Limited), AMP and County Natwest own 51 per cent.

³ Where possible, this inquiry, has used the most reliable, authoritative and up-to-date data available. It uses ICAO, DTRD and BTCE sources, along with more recent data sources such as the *Airline Business* survey of the world's 100 airlines. Confidentiality constraints mean that many ABS data are not sufficiently disaggregated for use in the Inquiry.

Qantas is substantially larger than the Ansett group, mainly as a result of its much larger international business. In 1996–97, Qantas carried approximately 16.3 million passengers on scheduled services of whom 6.7 million (41 per cent) were international passengers (Qantas 1997). International services contributed over half of the Qantas group earnings (before interest and tax) of \$517 million in 1996–97 (Qantas 1997). In 1996–97, Ansett carried 13.5 million passengers, of whom over 700 000 were international passengers (Ansett 1997). On this basis, international operations represented around 5 per cent of total Ansett group operations.⁴

Table 2.1 World's largest airlines, 1997^a

		Revenue	Passengers	Total employees	Jet and turboprop fleet
		US\$ million	million	no.	no.
1	American Airlines	18 570	81.00	111 500	641
2	United Airlines	17 378	84.20	91 779	575
3	Federal Express	15 872	0.00	114 636	609
4	British Airways	14 184	40.96	60 575	330
5	Delta Air Lines	13 590	101.15	63 441	543
6	Lufthansa	13 354	44.40	58 204	326
7	Northwest Airlines	10 226	54.70	50 000	405
8	Air France group	10 185	33.50	46 385	200
9	Japan Airlines	9 936	31.36	18 127	137
10	All Nippon Airways	8 798	40.83	15 200	139
...					
15	Qantas	6 131	18.61	30 080	148
...					
29	Ansett Australia	2 538	11.52	17 067	106

a Data for some airlines — in particular Japan Airlines and All Nippon Airways — appear to contain inconsistencies vis a vis those of other airlines with respect to implied employee and fleet productivity. It would seem that the data are not collected on a consistent basis across airlines.

Source: *Airline Business* (1998).

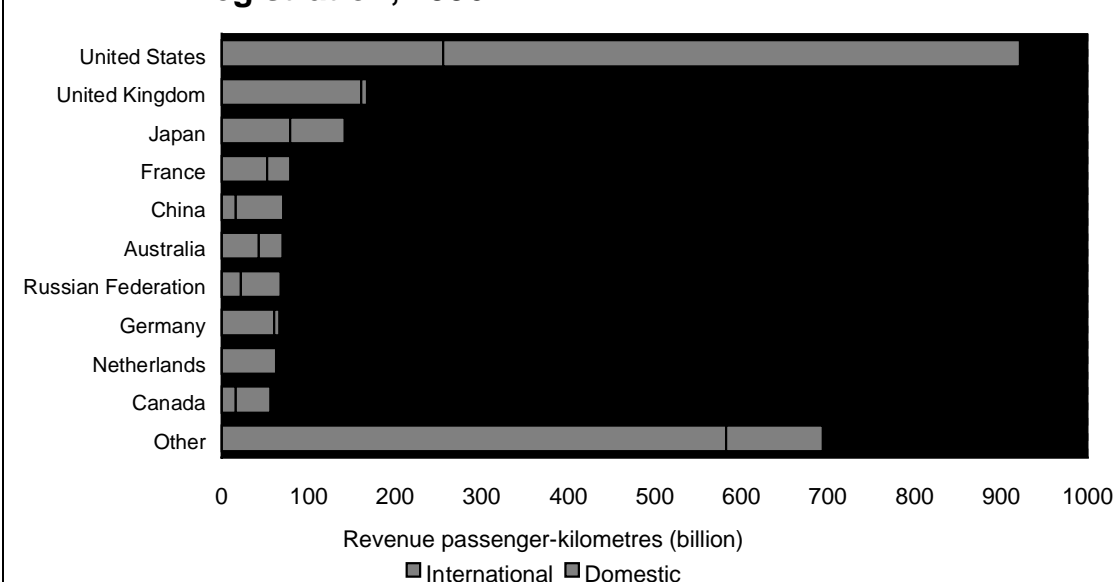
⁴ Figures used are total revenue passengers uplifted.

2.1.1 Passengers

Worldwide, 1996 saw scheduled airlines fly over 2000 billion domestic and international revenue passenger-kilometres (RPKs).⁵ Airlines registered in the United States accounted for over one third of this total world traffic (ICAO 1996b).

In 1996, Australian airlines were the sixth largest in the world in RPK terms, although they accounted for only 3 per cent of total world RPKs (Figure 2.1). They carried around 43 per cent of the approximately 14.1 million passengers flown to and from Australia⁶ in 1997 — Qantas having 38.5 per cent and Ansett International around 4.4 per cent (DTRD unpublished). The Australian market for international air passenger services is discussed in more detail in Appendix C.

Figure 2.1 Scheduled air passenger traffic by country of airline registration, 1996



Source: ICAO (1997)

⁵ This is a measure of demand based on the number of paying passengers on an aircraft multiplied by the number of kilometres flown.

⁶ 'Revenue' passengers on scheduled flights. Excludes 'non-revenue' passengers (those who paid less than 25 per cent of the standard air fare as defined by ICAO) and passengers on charter flights. No separate data are available for the number of passengers on charter flights, but in 1997 the capacity of charter flights approved was 98,000. Actual passengers carried would have been less than this number.

2.1.2 Freight

Freight is a relatively small part of the world's scheduled air traffic and is often a by-product of passenger services. Freight represented 28 per cent of total traffic by weight and earned 11 per cent of total revenue in 1996. Mail traffic (which with freight makes up 'air cargo') comprises even smaller shares of total weight carried and revenue earned at 2 and 1 per cent respectively (Table 2.2).

Table 2.2 Scheduled traffic, volume and revenue, 1996

	<i>Revenue-tonne-kms^a</i>	<i>Revenue</i>
	%	%
Passenger	70	88
Freight	28	11
Mail	2	1
Total	100	100

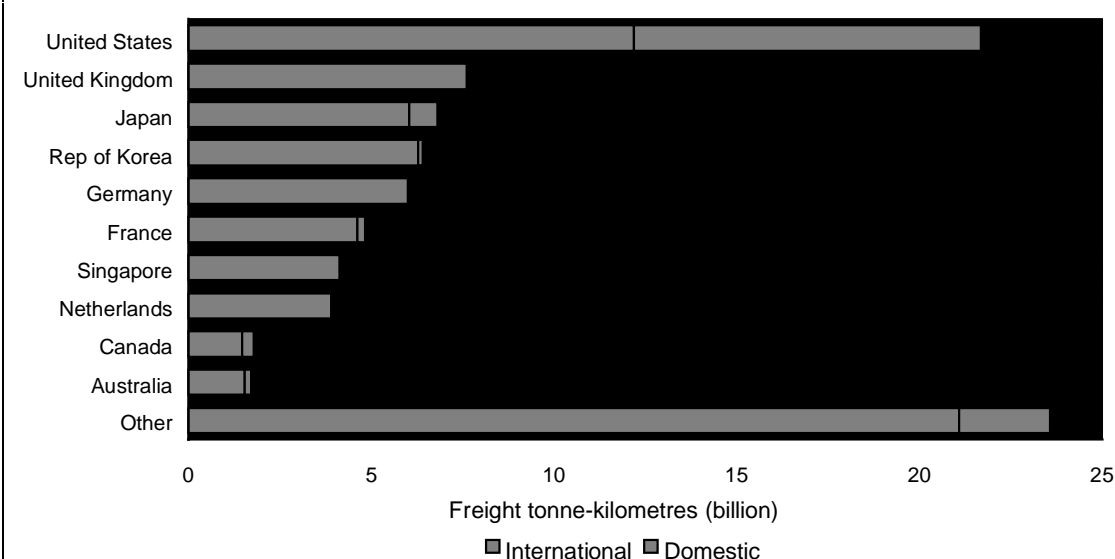
a Passenger revenue-tonne-kilometres include baggage. Excludes domestic operations within the Commonwealth of Independent States. Data include both domestic and international flights.

Source: ICAO (forthcoming).

Scheduled airlines flew 89 billion freight tonne-kilometres in 1996 (ICAO 1997).⁷ Worldwide, around 60 per cent of this world traffic was carried in the holds of passenger aircraft, with the remainder being flown on dedicated freight services. US airlines accounted for the largest share (at around one quarter) of freight (Figure 2.2).

Australian airlines carried around 2 per cent of total global freight traffic in 1996, placing them tenth in the world (a lower place on the world ladder than for passenger traffic) (Figure 2.2). Australia's international airlines (mainly Qantas) carried approximately 31 per cent of total Australian freight traffic in and out of the country in 1996. Australia has a considerable imbalance in freight, with inbound (import) freight far exceeding outbound (export) freight in terms of both the value of the freight and the revenue earned on that freight. As a consequence, Australian export freight rates are very low, reflecting marginal rather than full costs (Chapter 6).

⁷ A freight tonne-kilometre refers to a metric tonne of freight or mail carried one kilometre.

Figure 2.2 Scheduled air freight, by country of airline registration, 1996

Source: ICAO (1997).

2.1.3 Non-scheduled services

Non-scheduled services (including charter) are performed by both scheduled airlines and non-scheduled airlines. They comprised only 10 per cent and 15 per cent of total world passenger and freight traffic respectively in 1996 (ICAO forthcoming). Scheduled airlines carry more charter traffic and earn more charter revenue than non-scheduled operators (Table 2.3).

Table 2.3 Share of world charter traffic and revenue, by type of carrier, 1996

	<i>Revenue passenger-kms</i>	<i>Revenue freight tonne-kms</i>	<i>Revenue</i>
	%	%	%
Scheduled airlines	54	59	59
Non-scheduled operators	46	41	41
Total	100	100	100

Note: Data include international and domestic traffic. ICAO advises that the data for scheduled operators are relatively unreliable because of poor reporting for this type of operation.

Source: ICAO (forthcoming).

Data for the analysis of charter traffic by country are available for scheduled airlines only. These carriers generally use charter services to explore new

markets or to cater for special events. Airlines registered in the United Kingdom — carrying predominantly leisure travellers on inclusive holiday packages — accounted for the largest share of the *passenger* charter market in 1996 (in terms of revenue passenger kilometres). US carriers dominated the global market for *freight* charter services (Table 2.4).

Table 2.4 Charter traffic carried by scheduled airlines, 1996^a

<i>Rank</i>	<i>Country of airline registration</i>	<i>Revenue passenger-kms</i>	<i>Rank</i>	<i>Country of airline registration</i>	<i>Revenue freight tonne-kms</i>
		million			million
1	United Kingdom	28,015	1	United States	5,581
2	Germany	20,398	2	Russian Federation	1,190
3	United States	13,989	3	Netherlands	900
4	Russian Federation	12,590	4	Korea, Republic of	420
5	Spain	11,505	5	United Kingdom	211
6	Indonesia	6,929	6	Germany	153
7	China	4,179	7	Brazil	109
8	Netherlands	3,659	8	Israel	104
9	France	2,844	9	China	67
10	Switzerland	2,752	10	Ukraine	37
	World total	138 756		World total	9 030
	Australia	10		Australia	3

^a These data are for both domestic and international services.

Source: ICAO (forthcoming).

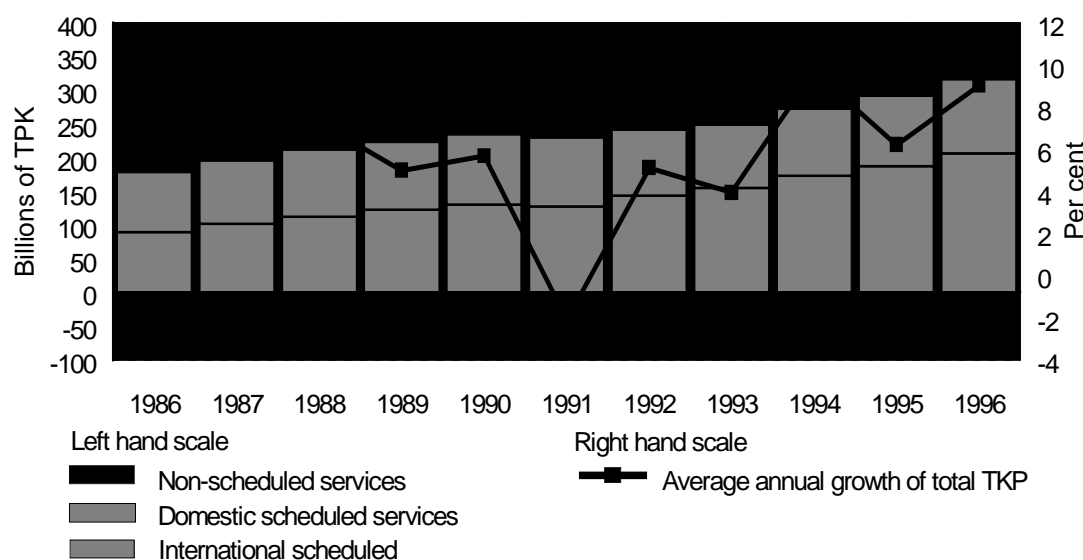
Australian scheduled airlines' share of world charter traffic is very small, with less than one tenth of one per cent of the total passenger and freight markets in 1996. The number of freight charter flights (by scheduled and non-scheduled airlines) to and from Australia grew significantly between 1992 and 1995 from 375 to 720 (DTRD 1996).⁸ However, passenger and freight charter traffic by scheduled airlines decreased markedly from 1995 to 1996. Passenger charter traffic decreased from 53.2 million RPKs in 1995 (ICAO 1996b) to only 10.0 million in 1996 (Table 2.4). The volume of charter traffic in the Australian market is therefore not only very small relative to world charter traffic, but on the basis of data available, highly variable.

⁸ There has been a decline in both passenger and freight charter capacity approved since 1995 (Appendix C).

2.2 Growth and distribution of world air traffic

Air transport is a high growth industry, although the rate of growth has been slowing as the industry becomes larger and more mature, and recently because of the Asian crisis (Figure 2.3). Factors contributing to sustained growth in traffic include economic growth, the growth in international trade and the declining real cost of air travel (Doganis 1991). Demand characteristics of air travel are discussed in Section 2.3.

Figure 2.3 World air traffic, 1986 to 1996



Note: A tonne-kilometre performed (TKP) is one tonne of revenue load (passenger, freight or mail) carried for one kilometre. The data for non-scheduled airlines are rough estimates due to poor reporting for this type of operations.

Source: ICAO (forthcoming).

Growth was particularly rapid in the 1960s and 1970s. Average growth rates in terms of tonne-kilometres performed fell from an average of 12 per cent per year at that time to around 8 per cent per year in the early 1980s (ICAO various). They fell further to around 5 per cent per year between 1986 and 1995, declining strongly during the economic recession of the early 1990s. Tensions in the Middle East (which culminated in the Gulf War) discouraged many people from flying. The industry actually contracted in 1991. Traffic has expanded since, and grew at between 4 and almost 10 per cent annually between 1992 and 1996 (Figure 2.3). However, growth is slowing again as a result of the recent Asian currency crisis (Box 2.1).

Box 2.1 Implications of the Asian currency crisis

In 1997–98, several economies in East Asia experienced a currency crisis, as the currencies of Indonesia, Thailand, the Philippines, Malaysia and the Republic of Korea rapidly depreciated against the US dollar and other currencies, including the Australian dollar.

This has led to slower growth, or even contraction, for several Asian economies. Demand for international air services has fallen, and may fall further. Preliminary figures for the year between March 1997 and March 1998 show a 12 per cent drop in the total number of short term overseas visitors to Australia. Overseas visitor arrivals from Asia declined approximately 29.5 per cent over the same period (China was the notable exception). South East Asia (Indonesia, Malaysia, the Philippines and Thailand) accounted for approximately 30 per cent of the fall, leaving North East Asia (China, Japan, the Republic of Korea and Taiwan) accounting for 70 per cent. By country, the largest declines in overseas visitors came from the Republic of Korea (84 per cent), Thailand (66 per cent), Indonesia (57 per cent) and the Philippines (42 per cent). Japan, Australia's largest source of inbound short term visitors (at around 20 per cent) experienced a decline of 17 per cent (ABS 1998).

This fall in Asian air travel has affected many international carriers. The Republic of Korea's two airlines, Korean Airlines and Asiana, have seen significant reductions in domestic and international service load factors. These and other airlines, such as Air New Zealand, Garuda Indonesia, Qantas and Ansett International, have reduced the number of international services in the region. Philippines Airlines ceased services to Australia altogether, Qantas responding by virtually doubling its own capacity on the route (Box 4.3). New aircraft orders have been deferred or cancelled.

Most of the growth of air traffic from 1986 to 1996 occurred in scheduled international air traffic (Figure 2.3). Representing 46 per cent of world traffic in 1986, scheduled international services increased their share to 58 per cent in 1996. Non-scheduled services have grown rapidly too, although from a low base.

The high growth rates in world international traffic mask differences in growth from one part of the world to another (Table 2.5). Asian airlines had until recently experienced growth rates well above the world average, whereas growth in Africa has been more modest. The rapid growth of Asian airlines, such as Cathay Pacific, Malaysia Airlines and Singapore Airlines changed the structure of the industry. Carrying not much more than 10 per cent of the world's international passenger and freight traffic in 1975, Asian airlines accounted for over 30 per cent of traffic in 1996. The position of European and

other non-US airlines was eroded significantly: overall, European airlines' share of international traffic fell from just over half of the world's total in 1975 to around 35 per cent in 1996 (ICAO various).

Table 2.5 Growth and distribution of scheduled international traffic, 1986 to 1996

<i>Region of airline registration</i>	<i>Revenue passenger-kilometres</i>		<i>Freight tonne-kilometres</i>	
	<i>Share of world total, 1996</i>	<i>Average annual growth, 1986–96</i>	<i>Share of world total, 1996</i>	<i>Average annual growth, 1986–96</i>
	%	%	%	%
Europe	34.8	9.0	33.1	7.1
Africa	3.4	5.6	1.8	3.8
Middle East	4.5	6.0	5.2	9.0
Asia–Pacific	30.6	10.2	37.7	11.4
North America	21.0	8.9	18.0	13.4
Latin America and Caribbean	5.7	7.2	4.2	7.6
World	100.0	8.6	100.0	9.2

Source: ICAO (various).

One factor in the variation in growth rates by region is that regions are at different stages of economic development (Hanlon 1996). The relatively rapid growth in the international traffic carried by Asian airlines was associated with an increase in the level of economic activity and personal income in the region. Despite being in a mature growth stage, North American airlines have maintained relatively high growth rates in international traffic (Table 2.5). This growth has been associated with the expansion of previously domestic US airlines into international markets following domestic deregulation in the 1980s (Doganis 1991).

2.3 Growth in Australia's international air transport industry

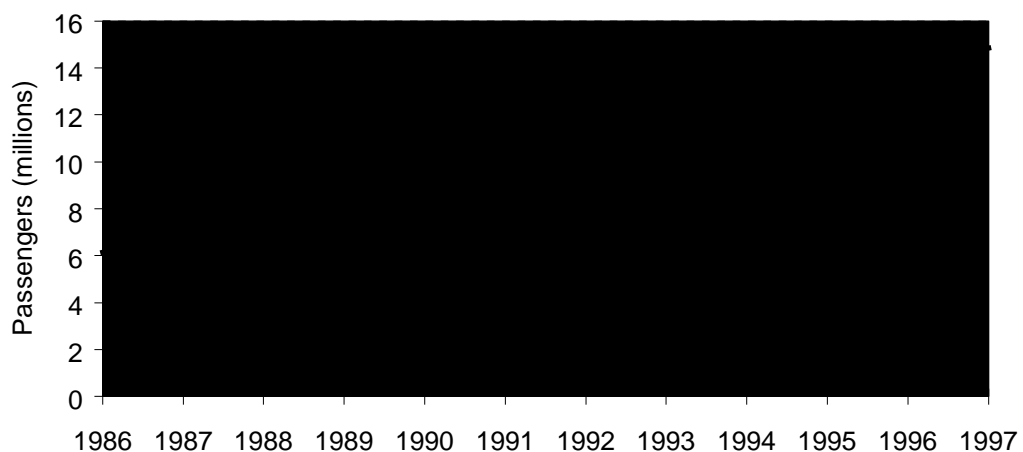
Growth of international passenger and freight traffic carried to and from Australia has been rapid, with average annual growth rates of 8.1 per cent and 7.8 per cent respectively between 1986 and 1996 (ICAO various). Despite being rapid in absolute terms, these rates were lower than the global averages, and those achieved in the major markets of North America and the Asia–Pacific region.

2.3.1 Traffic carried to and from Australia

The number of passengers carried to and from Australia more than doubled between 1986 and 1997 (Figure 2.4), with the number of overseas visitors increasing at an average annual rate of 11.1 per cent. Traffic to and from South East Asian countries and Japan grew most strongly. Taking a holiday was the main purpose of overseas visitors to Australia in 1997 (accounting for 59 per cent of all visitors), followed by visiting friends and relatives (19 per cent) and business (10 per cent).

The number of Australian residents travelling overseas has also grown, increasing at an average annual rate of 6.1 per cent between 1986 to 1997. Taking a holiday was the main reason for Australians travelling overseas in 1996, accounting for 47 per cent of all departures in 1996, followed by visiting friends and relatives (24 per cent) and business (18 per cent).

Figure 2.4 International passengers carried annually to and from Australia, 1986–97

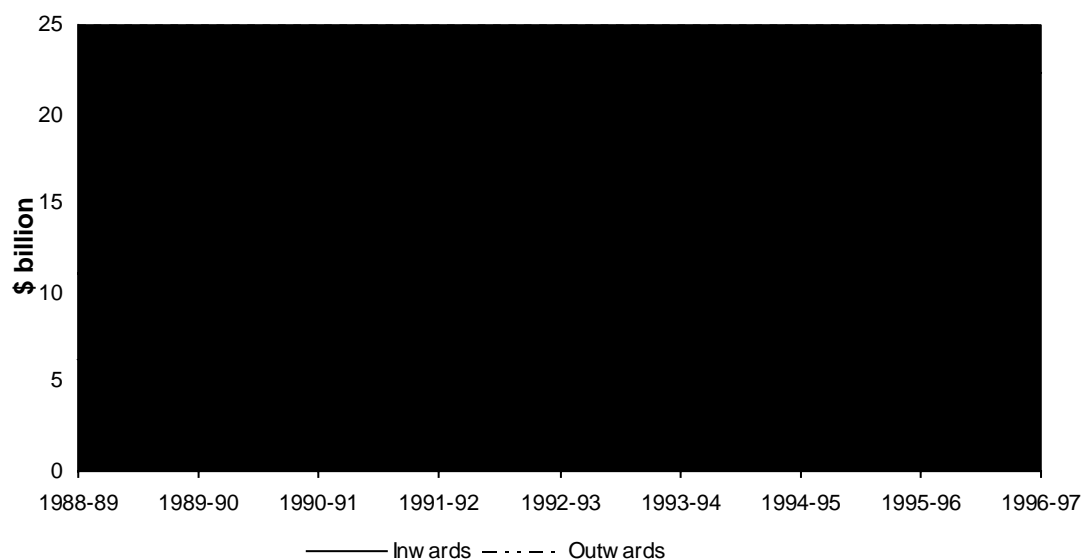


Source: DTRD (unpublished).

From a significantly lower base, freight has also grown considerably (Figure 2.5). The value of inbound air freight grew by an average of 9 per cent per year between 1988–89 and 1996–97. Outbound air freight grew by an average of 12 per cent per annum over the same period.

The Australian international air transport industry and markets are discussed further in Appendix C.

Figure 2.5 Value of air freight carried annually to and from Australia, 1988–89 to 1996–97



Note: Includes all air freight transported in and out of Australia recorded on customs documents received by the ABS.

Source: ABS (1997b).

2.3.2 Major Markets

Around 70 per cent of total (scheduled and unscheduled) passenger traffic to and from Australia in the year ended April 1998 occurred between Australia and ten foreign countries (Table 2.6). The trans-Tasman route attracted the highest volume of passenger traffic, reflecting New Zealand's proximity to Australia as well as family, cultural and trade links. Fifteen per cent of Australia's total international passenger traffic in the year ended April 1998 was between Australia and New Zealand. Asian countries feature prominently among the top ten, particularly Japan. Indeed, if traffic were measured only in terms of inbound passenger numbers, Japan would be the most important market. The United States and the United Kingdom are also major markets.

Table 2.6 Passengers to and from Australia by foreign economy, year ended April 1998^a

<i>Between Australia and:</i>	<i>Passengers</i>	<i>Proportion of total</i>
New Zealand	2 236 516	15.1
Japan	1 723 710	11.6
United Kingdom	1 591 425	10.7
United States	1 402 831	9.5
Indonesia	930 967	6.3
Singapore	747 515	5.0
Hong Kong	608 148	4.1
Malaysia	483 403	3.3
Taiwan	375 385	2.5
Korea, Republic of	369 070	2.5
Other countries	4 335 552	29.3
All countries	14 804 522	100.0

^a These are origin-destination data which show the number of passengers who commence or finish their journeys in the foreign countries listed.

Source: DTRD (unpublished)

2.4 Demand characteristics of air travel

Air travel is a means to an end, not an end in itself. People travel in order to undertake business at their destination, to visit friends and relatives or have a holiday. Air freight is also an intermediate product. Thus, the demand for air services is derived from the demand for the products of business and leisure activity and the need to deliver freight rapidly and in a time sensitive manner.

Many factors influence the consumption of passenger air services, particularly airfares and income (broadly defined). Other influences on demand include population growth, the social environment, attitudes to travel, and quality factors such as the speed, safety and convenience of air travel (Doganis 1991). Particularly important is the type of traveller. Air passengers can be broadly divided into two categories:

- leisure passengers, who include holiday travellers and those visiting friends and relatives; and
- business passengers.

For a study of the Australian industry each of these can be further subdivided into:

- inbound and outbound foreign passengers;
- inbound and outbound Australian passengers;
- third country foreign passengers who travel on an Australian airline between foreign airports; and
- Australian passengers flying between foreign airports on a foreign airline.

The demand for air travel is not a demand for a single product, even over a given route. Hence, provision of a range of services can meet a variety of types of demand. For example, demand would be expected to respond positively to higher frequencies over a given route as business travellers are induced to make trips that would not otherwise have been convenient. Some passengers want cheap 'no-frills' service, others want more expensive but more attentive service.

There has been considerable research on the characteristics of the demand for international air services. The general consensus is that the demand for airline travel is highly elastic with respect to income, but generally somewhat less elastic with respect to fares (for example, BTCE 1995).

2.4.1 Income elasticity

A community's rising level of income stimulates the demand for air travel in two main ways, a rise in private disposable incomes leads to higher expenditure on leisure travel and higher economic activity increases the demand for business travel.

Both historical and cross sectional data show the high responsiveness of air travel to income (Hanlon 1996). Worldwide demand for air travel has grown much faster than Gross Domestic Product, both because of rising incomes and a decline in the real costs of air travel. The rapid growth of air services in the Asia Pacific region in recent years is partly attributed to rapidly rising incomes in those countries. But worldwide demand has also fluctuated markedly with cyclical changes in world income. The worldwide recession of the early 1990's contributed to a decline in air travel in 1991, the first time this had occurred (Figure 2.3). Similarly slowing or negative rates of growth in many Asian countries have already contributed to reductions in international air travel in the region (Box 2.1).

Evidence from domestic and international studies suggest that the income elasticity of demand for international air services is of the order of 2, meaning a 1 per cent increase in income will result in a 2 per cent increase in the demand

for air services (Tretheway and Oum 1992). More specific evidence for the Australian market suggests that inbound leisure travel may be highly sensitive to income, and that there are large differences between countries in the responsiveness of air travel to Australia to changes in income (BTCE 1995). These differences may be attributable to both the level and distribution of income in each country. Thus, a rise in average income may not have as great an effect if income is distributed unevenly.

The rapid growth in air travel over many years raises questions about the maturity of markets and when saturation might be reached. This will vary from market to market, but it is apparent that in many cases considerable latent demand still exists. In some ways air travel is still a 'young' growing market — there are many potential customers who have not yet travelled internationally, or who have done so only to a limited extent. Even in the United States and the United Kingdom there are large proportions of the population who rarely if ever fly (Hanlon 1996). Income growth is therefore expected to continue to have a major influence on the demand for air travel, particularly in developing countries.

2.4.2 Price elasticity

Changes in the consumption of air travel are also attributable to changes in air fares, although business travel is generally less sensitive to changes in air fares than leisure travel. This is partly because business travellers often need to fly at short notice to specific destinations, and usually at company rather than personal expense.

Leisure travel is more discretionary, usually at personal expense and is often planned well ahead. Many leisure travellers are visiting friends or relatives, and so have a specific destination, but others may choose between multiple destinations. Further, expenditure on leisure travel is discretionary, so it competes with expenditure on many other goods and services such as home entertainment systems, swimming pools and restaurant dining. Given the many possible substitutes, leisure travellers tend to be sensitive to changes in the overall costs of travel. As the airfare is only a part of the overall cost of a trip, the demand for air services will be less price elastic than the demand for tourism as a whole, particularly where alternative modes of travel are limited, as they are to and from Australia. Like many other international transactions, the demand for travel is also sensitive to changes in costs induced by changes in the exchange rate.

Airlines are able to influence demand for their services through loyalty programs such as frequent flyer schemes. The key to frequent flyer programs is

being able to offer customers a large and useful network, so such programs are often a feature of alliances between airlines. Members of Ansett's frequent flyer program, for example, can accrue and redeem frequent flyer points when travelling on services operated by eleven international airlines (sub. 19, p. 21).

Specific evidence of the degree to which consumption of air services responds to changes in airfares is varied. Gillen, Harris and Oum (1997) note that most '... studies indicate an elasticity with respect to price of less than -1 for business travel and an upper range elasticity for leisure travellers of -1.65 (p. 45) They adopted a median value of -1.35 in their modelling of the effects of liberalisation on air services in Canada. The Bureau of Transport and Communication Economics (BTCE 1995) estimated price elasticities of demand for inbound (to Australia) and outbound (from Australia) leisure and business travellers. While these estimates may be questioned on various grounds, and vary markedly from one country to the next and between inbound and outbound travel, they are relatively consistent in showing the demand for leisure travel to be considerably more price elastic than the demand for business travel (Appendix F).

The price elasticity of demand will vary with market characteristics. For example, an inbound market dominated by tourists might be particularly price sensitive where other destinations are close substitutes for Australia. On the other hand, where air fares are part of a total travel package, demand for air travel may be relatively unresponsive to price. This is because the price of the airfare is disguised, and may be a relatively small component of the cost of the total package (which could also include accommodation, meals and tours among other things). Japanese and Korean tourists are often cited as examples, and this is supported by the relatively low (in absolute terms) elasticities of demand estimated by the BTCE for tourists from those countries (Appendix E)

Changes in the mix of travellers over time and across regions have important implications for airline pricing and average yields. For example, business travel by Australian residents has been growing faster than leisure travel, meaning that the overall demand for air travel by Australian residents may be becoming more price inelastic (Appendix C). However, leisure travel far exceeds business travel, and at the global level is growing faster (Hanlon 1996). To the extent that this is reflected in Australia's inbound traffic, the demand may be becoming more price elastic over time.

2.4.3 Non price effects

Non-price characteristics are also important influences on demand, especially for business travellers. Airlines attempt to differentiate themselves by offering

different non-price benefits such as frequency and convenience of service, access to airport lounges and quality of in-flight service. The perceived safety record of airlines can also be a major marketing advantage for airlines in competing for customers. Qantas claimed that non-price factors:

... aim to make the journey easier, safer and more comfortable for passengers and are a competitive response by airlines. Improvements can be seen in terms of improved schedules, ease of purchase, and service on the ground and in the air (sub. 25, p. 14).

Evidence suggests that airlines take advantage of the price insensitivity of business travellers by charging high prices and compete instead through non-price attributes. Qantas (sub. 25) claimed that leisure travellers are also becoming more sensitive to these non-price factors especially service, frequency and convenience of connections.

2.4.4 Yield management

Airline tickets are non-transferable in principle. They are in practice significantly less transferable for international flights than for domestic flights, but electronic ticketing (which requires personal identification) is tending to make domestic tickets less transferable. Non-transferability helps airlines to segment markets. Not only can they offer a substantial differentiation of product on the one aircraft (by offering different classes of travel, conditions of advance purchase and cancellation and so on), but they can also charge different prices for similar seats on an aircraft. Airlines can tailor prices to classes of customers and, for price inelastic customers, set fares significantly above the marginal or average costs of supplying the service. Thus business class fares are higher than economy class fares both because they provide passengers with a higher standard of service, and because business class users are often unable to avoid booking (and altering reservations) at short notice and are prepared to pay for this convenience.

Given enough knowledge about the preferences of different groups of travellers, and the use of powerful computer reservations systems (CRSs), airlines can vary the price almost continuously — both across classes of passengers and over time — as a means of increasing yields. Yield management systems operate in parallel with the use of consolidators (or wholesalers) to provide consumers with a wide choice of carriers, prices, routes and times.

These techniques may raise some concerns about anticompetitive behaviour, and may appear inequitable when different travellers are charged different prices for similar seats on the same flight. Further, the development of more sophisticated yield management systems based on personal travel and

expenditure preferences, and the vertical integration of airlines and travel agents may act to constrain transparency and consumer choice.

There are however, some economic and social advantages of price discrimination. It may enhance economic efficiency: given that the marginal cost of carrying an extra passenger is well below average cost, price discrimination allows the airline to cover its fixed costs with highly priced business and economy fares and still cover marginal costs with its discounted fares. Price discrimination also has some equity advantages: it allows travel by some who would be unable to afford the airfare under uniform pricing and it may allow the operation of some flights that otherwise would not be viable. However, some passengers will pay more — often significantly more — than they would if uniform pricing applied.

Like other commercial airlines, the major Australian airlines use sophisticated yield management systems to improve yields and overall efficiency. Qantas noted that it:

... has invested heavily in staff, product standards and yield management systems to ensure that its efficiency objectives are met (sub. 25, p. 20).

Air New Zealand also stated that:

Yield management systems continue to be used within alliances, with benefits to both airlines and consumers. Airlines maximise the use of their capacity, and consumers get access to the lowest market fares (sub. 6, p. 6).

2.5 The demand for freight

Air transport plays a significant role in the movement of high-value and/or time-sensitive freight and mail. Timely and efficient air freight services can help Australian firms compete with rivals for export markets and facilitate imports of inputs. It is an increasingly important means of global implementation of just-in-time inventory management systems. Inadequate air links can hold back trade and investment relationships.

More than 90 per cent of Australian international air freight is carried in the belly-holds of passenger aircraft. Because freight carriage on many routes is essentially a by-product of the carriage of passengers, charges can be very low, essentially related to the marginal fuel cost of carrying extra weight.

Less than 10 per cent of Australia's international air freight is carried in dedicated freighter aircraft, operated predominantly by foreign airlines. Dedicated freight services operate overnight across the Tasman and to Asia, the United States and Europe.

Air freighted imports consist mostly of high-value, high-tech manufactured goods, such as computers and other electronic goods, whereas exports are dominated by perishable primary products of much lower market value. Demand tends to be highly price elastic where low value to weight cargo is concerned, restricting airlines' ability to raise tariffs even on routes with limited competition. The consequence is that these export commodities attract amongst the world's lowest rates for carriage by air (sub. 25, p. 5). For example, freight rates ex-Australia to Tokyo can be as low as \$1.32 per kilogram, and those to Singapore \$0.53 per kilogram (HRSC 1996, p. 6).

As freight into Australia has a much higher value per kilogram, and there is a greater demand for space, freight rates are higher. Import freight rates to Sydney from Tokyo and Singapore are reported as being \$12.44 per kilogram and \$5.82 per kilogram respectively (HRSC 1996, p. 6).

Freight charges for dedicated freight services and *ad hoc* freight charters need to cover the full costs of operating aircraft, at least on average. Australia's typically high value to weight import cargo can support some dedicated services, but most of its perishable primary product exports cannot. The inability of many exporters to meet the cost of providing dedicated air freight capacity means that many dedicated freighters leave Australia empty to collect higher yielding freight from alternative sources. Having brought freight into Australia, a freighter may fly empty from Sydney to Singapore to pick up cargo, then fly on to Tokyo. Freight operators would be reluctant to carry low value, low return freight if it compromised their ability to carry high value high return freight on a subsequent leg. Expanding on the example given, a freight operator may be reluctant to carry primary produce from Australia to Tokyo via Singapore if it meant that yields on the Singapore to Tokyo leg were reduced substantially.

2.6 The economics of airlines

The production and cost characteristics of international airlines have important implications for industry structure and the competitiveness of Australia's airlines. If large airlines can achieve significantly lower costs through economies of scale and scope, the consequences of liberalisation may be profound, especially for smaller carriers. Airlines are also only one part of a larger air transport industry which includes aircraft manufacturers, aircraft lessors, airports, travel agents, ground handlers, caterers, and computer reservation systems service suppliers. Competitive outcomes at one level may depend closely on vertical linkages between firms operating at different levels within the industry.

2.6.1 Economies of network size and traffic density

The size of an airline's network (economies of network size) and the traffic flows over that network (economies of traffic density) influence airline costs.

As networks become larger, the number of possible city-pairs rises exponentially. The required fleet of aircraft also increases rapidly. Average cost will decrease to the extent that fixed costs can be spread over a greater quantity and variety of output. For example, airlines can reduce their average in-house engineering and maintenance costs as they increase their fleet of aircraft (Qantas sub. 25, p. 16). Similarly the Ansett group and Air New Zealand are looking at ways of rationalising their respective maintenance facilities in Australia and New Zealand to benefit from economies of scale (Thomas 1998). Lower engineering and maintenance costs per aircraft translate into lower costs per unit of output. And economies may be achieved as the number of city pairs increases, by sharing some overhead costs (such as information technology systems) over the increased range of products. Thus, economies of network size encompass both of the more traditional concepts of economies of scale and scope.

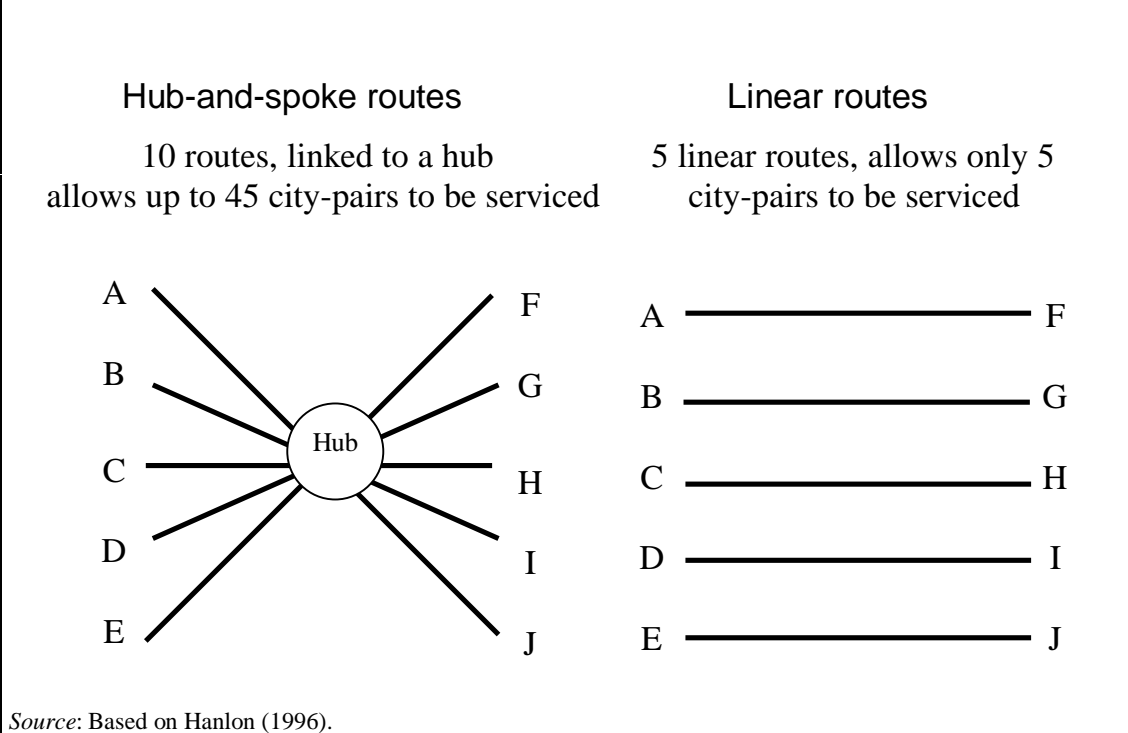
Oum and Zhang (1997) suggested that mildly increasing returns to scale may derive from operating characteristics such as load factor, stage length, network size and scale of outputs. If an airline's average length of haul increases as its network grows, for example, the average cost per RPK can fall as the airline can take advantage of larger aircraft and fewer intermediate stops (Oum and Zhang 1997).

Economies associated with traffic density can be significant and may help explain the development of hub and spoke systems in many markets. Economies of traffic density occur when increasing the amount of traffic on an existing route leads to lower unit costs. Unit costs decrease when the size of the aircraft used increases, the number of seats filled on an aircraft rises and fixed indirect costs are spread over more passengers and freight. These unit costs include route-specific costs such as ticketing, sales, promotion and terminal lease or ownership costs.

Empirical studies of the United States and Canadian domestic passenger markets suggest that there are significant economies associated with traffic density (Caves, Christensen and Tretheway 1984; Gillen, Oum and Tretheway 1985). Caves, Christensen and Tretheway (1984) estimated that a one per cent increase in the number of passengers would increase total costs by only 0.8 per cent. Another study found that costs of US airlines decreased by 0.1 per cent cost for a 1 per cent increase in the use of hub and spoke routing (McShan and Windle 1989).

An airline may be able to operate a hub and spoke system better as it grows and develops a larger network. By channelling traffic through hubs, economies of traffic density may be achieved. Thus, economies of network size and density may be achieved simultaneously. ‘Hubbing’ significantly reduces the number of aircraft required to join city-pairs, albeit with connections through the hub (Figure 2.6).

Figure 2.6 Hub and spoke routes and linear routes



The degree to which Australian airlines can benefit from economies of network size and density is influenced by their networks, by geography and by the regulatory structure. This can involve the integration of regional feeder airlines, and the domestic and international components of their businesses. Hubbing through Sydney allows Qantas and Ansett to draw together international travellers in the one spot and operate their subsequent international legs more efficiently. It is more difficult for the Australian airlines to develop efficient hubbing practices in other countries, though some cases exist. Qantas uses Singapore as a hub for combining passenger flows from different Australian cities, then to operate beyond services to Europe.

Qantas stated that future economies of size:

... are likely to be achieved internally through the granting of fifth and seventh freedom rights and externally via alliances and codeshares. For example, joint

Qantas-British Airways lounges in Bangkok, Los Angeles, Singapore, Hong Kong and Manila derive economies of density advantages (sub. 25, p. 16).

Ansett International also stands to gain from economies of network size and density. A relatively new entrant to international travel, Ansett International has yet to develop an extensive international network in its own right and (other things being the same) may be expected to have higher unit costs than Qantas, which operates a much larger international fleet. However, Ansett International and Ansett Australia benefit from their close working relationship and their ability to share costs between the domestic and international networks.

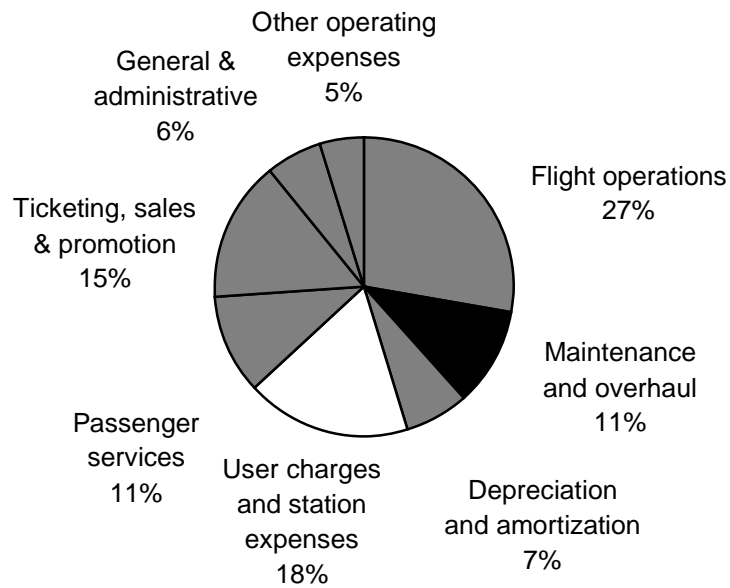
The interactions between the cost characteristics of airlines, consumer preferences for seamless travel, and the regulatory structure have important implications for the structure of the international airline industry. Airlines have responded to these and other pressures by forming alliances which enable them to offer global services and to reduce costs (Chapter 6).

2.6.2 Comparison of productivity and costs

Airlines are coming under intense pressure to improve efficiency as the regulatory environment relaxes and competition increases. But each airline operates different networks and thus faces different challenges. Some, such as Qantas, Singapore Airlines and Cathay Pacific, have long stage lengths which help them to keep lower average costs per RPK. Other airlines that have more closely networked operations may be able to develop more economic hub-and-spoke systems and thus gain a competitive edge.

Some costs are relatively common to all airlines, including fuel and oil, aircraft ownership and day-to-day maintenance costs. Airlines can decrease these costs through judicious purchasing policies, network design and careful matching of aircraft to loads. Typically, labour accounts for around 30 per cent of an airline's costs. Labour costs vary from country to country and may be an important source of competitive strength, so airlines use global sourcing of some labour inputs. Some airlines have data processing facilities in low-wage countries, and many undertake major maintenance work outside their base country.

A breakdown of the average operating expenses of ICAO airlines is shown in Figure 2.7. Flight operations, which include flight crew salaries and expenses, aircraft fuel and oil, and other factors (such as insurance, rental and training) are the largest single contributor to airline costs, accounting for 27 per cent. Next in magnitude after flight operations are user charges and station expenses. These incorporate landing and other associated airport charges (Chapter 8 provides further information regarding airport charges).

Figure 2.7 Average operating expenses of ICAO airlines, 1996

Note: Preliminary data. The Commonwealth of Independent States has been omitted in the calculation of these figures.

Source: ICAO (unpublished).

The input prices facing airlines and the efficiency with which airlines use inputs will determine their overall cost competitiveness. Using 1993 ICAO data, Oum and Yu (1997) estimated the cost competitiveness of different airlines relative to American Airlines, and over time (Table 2.7).

Table 2.7 Differences in cost competitiveness of international airlines relative to American Airlines, 1993^a

	<i>Source of cost differences</i>		<i>Cost competitiveness (3)=(1)+(2)</i>
	<i>Input prices (1)</i>	<i>Efficiency (2)</i>	
	%	%	%
North America			
American	0	0	0
United	3.7	-3.8	-0.1
Delta	7.4	-5.6	1.8
Northwest	4.6	-9.9	-5.3
Continental	-11.4	-0.7	-12.1
US Air	2.6	17.4	19.9
Air Canada	-11.5	19.9	8.5
Canadian	-8.6	13.7	5
Asia Pacific			
Japan Airlines	38.4	14.3	52.7
All Nippon	40.4	23.1	63.5
Singapore	-20.3	3.9	-16.3
Korean	-23.8	0.8	-22.9
Cathay	-6.4	2.6	-3.8
Qantas	-8.9	11.6	2.7
Thai	-52.1	42.9	-9.3
Europe			
Air France	8.8	12.4	21.2
Lufthansa	16.8	3.8	20.6
British Airways	-2.9	10.2	7.3
SAS	25.4	17	42.4
KLM	16	-5.3	10.7
Swissair	35.5	2.8	38.3
Iberia	5.1	16.4	21.5

a Table shows the contribution of input prices and efficiency to the cost competitiveness of airlines relative to American Airlines. A positive figure indicates higher input prices or poorer efficiency, and poorer cost competitiveness.

Source: Oum and Yu (1997).

Oum and Yu's analysis covered 22 airlines, including Qantas (but not Ansett). The airlines were grouped into three regional groups: Northern America, Asia-Pacific, and Europe. It was found that, with the exception of the Japanese carriers, Asian carriers were generally more cost competitive than American carriers and that this predominantly resulted from lower input prices. The

American carriers, in turn, were more cost competitive than the European carriers, and this was attributed to the combined effects of lower input prices and better productive efficiency. However, Oum and Yu noted that the European carriers' productive efficiency improved relative to that of American Airlines between 1986 and 1993.

Oum and Yu (1997) decomposed observed unit cost differentials into the effects of differences in input prices, productive efficiencies and other variables such as stage length and size and mix of output (scheduled passenger, freight, non-scheduled, and incidental businesses). Sources of difference such as stage length can be substantial. Qantas, for example, had an observed actual cost difference from American Airlines of 24.6 per cent, meaning that its average cost (per RPK) was significantly lower than that of American Airlines. But Qantas could have been expected to have nearly 25 per cent lower costs simply as a result of its longer stage lengths, implying that it was roughly on par with American Airlines for all other factors in aggregate.

Oum and Yu (1997) removed the effects of stage length and mix of output from their analysis to focus on how cost competitive the sample airlines may be in the same market conditions. Cost competitiveness is determined by (a) what input they pay and (b) how efficiently they produce their services. The results suggest that the overall cost competitiveness of Qantas compared with most other airlines reasonably favourably (with some exceptions such as Korean Airlines, Singapore, Continental and Thai International) in 1993 (Table 2.7).

Over the period 1986 to 1993 Oum and Yu (1997) noted that among the Asia-Pacific carriers, Qantas (and Korean Air):

... were able to improve their cost competitive positions through significant efficiency improvements despite rising input prices (p. 167).

The improvement for Qantas was most notable between the 1990 to 1993 period when its cost competitiveness rose from a disadvantage (relative to American Airlines) of over 20 per cent to a disadvantage of only 2.7 per cent. That is, accounting for differences in input prices and operating characteristics, Qantas' costs were over 20 per cent greater than those of American Airlines in 1990 but only 2.7 per cent greater in 1993 (Oum and Yu 1997).

More recent evidence suggests that Qantas has achieved even greater cost savings and efficiency improvements. Some partial measures of productivity suggest that Qantas has continued to improve its productive efficiency. RPKs per employee grew from 1932 in 1993 to 2342 in 1997, and average use for all aircraft operated by Qantas (domestic and international) increased from 9.9 hours per day to 12.1 over the same period (Qantas 1997). The Ansett group has made similar improvements. Between 1992-93 and 1996-97, RPKs per

employee increased from 665 to 997 (Ansett Holdings Ltd 1997). However, it is unclear to what extent changes in contracting out by either airline may have influenced these partial measures of productivity.⁹

2.6.3 Vertical linkages

Some parts of the air transport industry are highly concentrated and firms operating in them have substantial market power. These include airline manufacturers (two manufacturers of large commercial jets globally), airports (regional monopolies), computer reservation systems (CRSs) (three systems Amadeus, Galileo and Sabre account for the large majority of world aviation trade, and have substantial market shares on a regional basis), ground handling (varies from country to country with some monopolies present), and catering (two major companies have 40 per cent of the world market, seven have 70 per cent) (*Airline Business* 1998).

In some cases, airlines have attempted to gain a competitive edge over their rivals by establishing a presence in a more concentrated upstream or downstream sector. This may create some savings through economies of scope and lower transactions costs, but more importantly may be used to restrict competitors through high charges or less favourable access to services. One of the most celebrated cases of this occurred when CRS systems were first developed. Airlines which developed and owned major systems were able to favour themselves by retaining the most prominent parts of computer displays. This became such an important competitive issue that codes of conduct were introduced in the United States and Europe to discourage screen bias. This lessened the advantages for individual airlines to own these systems to the extent that shared ownership of systems by airlines has become common (Hanlon 1996).

Some concern was shown during this inquiry over linkages which some overseas airlines have with airports and ground handling facilities in their home country, either directly through the airline itself or through the common ownership of airlines, airports and ground handling services by the government. The Chicago convention and many ASAs require non discriminatory treatment of foreign and national airlines (Chapter 8). However, this does not prevent high charges being levied, which through common ownership, may act to the advantage of the incumbent airline and its owners.

⁹ For example, the Australian and International Pilots Association stated that: 'When airlines state employee levels and productivity there is a distinct tendency to not mention subsidiary divisions that carry out vital work for the parent company.' (sub. 61, p. 8)

Another area where vertical linkages may be anti-competitive is between the airlines and travel agents. Reflecting a common practice worldwide, both Qantas and Ansett have travel agent subsidiaries (Qantas Travel Centres) and (Traveland) respectively. This practice has many advantages for the airlines, including giving preferences to the parent's air services over those of competitors.

2.7 Airline profitability

Despite a history of traffic growth, the profitability of the global airline industry has been cyclical but relatively poor on average. In many cases airlines have performed so poorly they are dependent on Government subsidy (Chapter 3). In turn, low profitability is in some cases partly the product of obligations imposed by governments on national airlines.

Doganis (1991) identified five phases of the industry between 1960 and the late 1980s. The first phase, which lasted through the 1960s, involved a period of relatively strong profitability as unit cost reductions more than compensated for decreases in load factors, revenue yields and fares. This was especially marked in the mid-1960s. The second phase (from 1968 to 1975) involved poor financial results, largely as a result of declining load factors and rising fuel prices. Doganis (1991) noted that fuel prices doubled in the four months between September 1973 and January 1974 and continued to rise thereafter: in mid-1975 fuel prices were three times the level of the previous two years (p. 18). There followed a short three year phase between 1975 and 1978 when the prices of fuel and other costs declined in real terms and demand was buoyant.

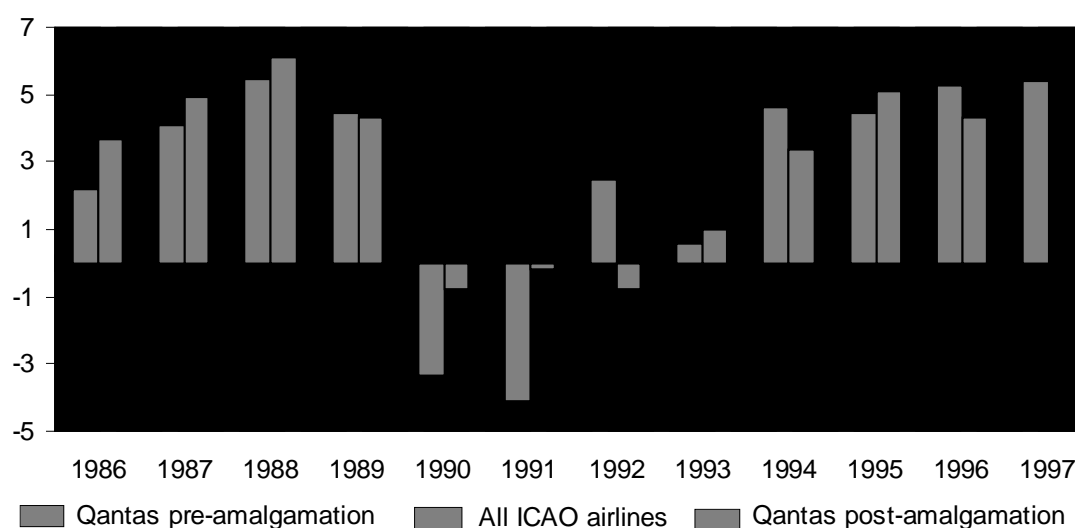
The fourth phase (1979 to 1983) meant large losses for the industry. Again, some of the blame was attributed to rising fuel prices, but the problem was exacerbated by stagnating demand and low yields (a proxy for prices). Some airlines went bankrupt in this phase. The fifth phase (the second half of the 1980s) saw a turnaround in profitability, as economic growth increased and the real price of fuel fell (Figure 2.8). Doganis noted that as a legacy of the losses they had been making, and in attempting to finance the purchase of aircraft needed to cope with the strong growth in demand, airlines were burdened with large amounts of debt (Doganis 1991, p. 20).

Another two phases are evident in the 1990s (Figure 2.8) The economic recession of the early 1990s and the large numbers of aircraft accumulated by airlines, squeezed profitability. The effect was exacerbated by general concerns about the safety of aviation (for example, hijacking) arising from tensions in the Middle East which culminated in the Gulf War in 1991. However, the industry

has recovered since 1993 and, at least until the Asian crisis, was achieving much the same level of profitability as in the late 1980s.

To obtain a barometer of the profitability of the Australian international aviation industry relative to all ICAO airlines, the profit performance of Qantas (both before and after its 1993 amalgamation with Australian Airlines) was compared with all ICAO airlines (Figure 2.8). The trend for Qantas appears to follow closely that of all ICAO airlines, both prior to and after its amalgamation with Australian Airlines. However, 1992 is a year worth noting, since the pre-merger Qantas deviated from the trend by registering a profit in a year ICAO airlines were recording losses.

Figure 2.8 Operating profit as a percentage of operating revenue, Qantas and ICAO airlines, 1986 to 1997^a



^a Data for ICAO airlines are for calendar years, data for Qantas are for years ending June 30.

Note: The Commonwealth of Independent States has been omitted in the calculation of ICAO airline figures. The 1993 Qantas amalgamation figure includes ten months of domestic airline operations.

Sources: ICAO (1996b), Qantas (1994), and Qantas (1997).

The relatively poor profit performance of the total airline industry masks quite varied individual airline performance. Net margins can be used as a measure of profitability, where net margin is the ratio of operating profit to sales revenue. Current data show a wide gap between the best and worst airlines (Table 2.8).

Table 2.8 **Airline net margins, 1997^a**

Airline	Net margin
	%
Top ten performers	
Air Lanka	23.0
Ryanair	16.5
Comair	15.7
Atlantic Southeast Airlines	14.1
Singapore Airlines	13.4
Midway Airlines	13.4
Mexicana de Aviacion	12.2
US Airways	12.0
Trans States Airlines	11.8
Kenya Airways	11.3
Australian airlines	
Qantas	3.2
Ansett	-1.0
Bottom ten performers	
AirTran Airlines	-43.8
Vanguard Airlines	-34.7
Kiwi International Airlines	-27.6
Southern Air Transport	-24.4
Croatia Airlines	-20.1
Asiana Airlines	-17.6
Pakistan International Airlines	-14.7
Air Zimbabwe	-12.1
American International Airways	-10.7
Mesa Airlines	-9.5

Note: Rankings are based on World's 148 largest airlines by revenue

a Net margin is the ratio of operating profit to sales revenue.

Source: *Airline Business* (1998).

A 1997 survey of 148 airlines found that 101 had positive net margins and 37 had negative net margins (net margins were not available for ten). Qantas achieved a ranking of 60 with a net margin of 3.2 per cent. This was lower than the average net margin of 3.3 per cent obtained by the top 100. The Ansett Group obtained a ranking of 109 with a net margin of -1.0 per cent (*Airline Business* 1998).

3 REGULATION OF INTERNATIONAL AIR SERVICES

International air services are subject to a complex regulatory framework. The overarching feature of this framework is the bilateral system of air services arrangements (ASAs) between countries. The Chicago Convention in 1944 established the foundation for these bilateral arrangements, and they have remained a stable feature of the global industry. The *Air Navigation Act* gives effect to the Chicago Convention in Australia and is a prominent part of the regulatory framework. One of the major objectives of this inquiry is to review this Act and the regulatory framework under the Competition Principles Agreement.

International air transport does not occur under the current bilateral regulatory system unless it is explicitly permitted. Whilst providing a mechanism to facilitate trade in air services, bilateral regulation also limits competition and the growth and development of international air services by restricting certain services.

This chapter examines the framework of international air services regulation and describes the regulation of a number of important aspects of international air services including scheduled and non-scheduled services, safety, the application of competition law to air services, state assistance to carriers and the role of the International Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA).

ASAs are negotiated bilaterally and generally comprise an Air Service Agreement, a Memorandum of Understanding and/or an exchange of letters. They are sometimes accompanied by other less formal and less transparent understandings. ASAs negotiated on a bilateral basis have been a feature of international air services since 1913.

3.1 History of bilateral air services regulation

Attempts have been made to achieve a multilateral agreement on international air services. The first multilateral legal convention on international civil aviation rights was signed in Paris in 1919 and came into effect in 1922. It established important principles such as the right for complete and exclusive sovereignty over a country's air space and the right of innocent passage over a predetermined and agreed route.

These principles provided the foundation for the Chicago Convention in 1944. Representatives from 52 countries met in Chicago to establish a multilateral system covering air traffic rights, control of fares and freight tariffs, and control of frequencies and capacity.

Box 3.1 Freedoms of the air

First freedom	the right of an airline of one country to fly over the territory of another country without landing
Second freedom	the right of an airline of one country to land in another country for non-traffic purposes such as refuelling or maintenance, while en route to another country
Third freedom (to)	the right of an airline of one country to carry traffic (passengers, cargo or mail) from its country to another country
Fourth freedom (from)	the right of an airline of one country to carry traffic from another country to its own country
Fifth freedom (intermediate and beyond)	the right of an airline of one country to carry traffic between two other countries providing the flight originates or terminates in its own country
Sixth freedom	the right of an airline of one country to carry traffic between two other countries via its own country. A sixth freedom is effectively a combination of two sets of third and fourth freedoms
Seventh freedom	the right of an airline of one country to operate flights between two other countries without the flight originating or terminating in its own country
Cabotage	the right of an airline of one country to carry traffic between two points within the territory of another country.

Source: DTRD (sub. 33, attach. 2).

The negotiations were not successful in achieving multilateral agreement on tariffs, frequency and capacity. This failure mainly reflected widespread concern that US airlines would dominate trade in air services because they had advantages in technology and production capabilities after the second world war. It also reflected the desire of the other main player at the conference, the United Kingdom, to protect its aviation industry (which had been weakened in the war).

The Chicago Convention established a basic system of air service rights commonly referred to as freedoms of the air (Box 3.1). These freedoms provide the backbone for negotiating capacity rights between countries under each ASA.

3.2 The bilateral framework

The bilateral system of ASAs starts from the principle of exclusive sovereignty over a country's own airspace and allows various freedoms established under the Chicago Convention to be granted to the carriers of other countries. Thus, the agreements covering trade of international air services differ from agreements for trade in most other goods and services (Box 3.2).

Box 3.2 Different types of trade agreements

Trade agreements between countries range from bilateral to multilateral, from coverage of a single product or service to all goods and services, from coverage of a single trade measure to all trade measures. They may set general rules for behaviour or specify targets or required outcomes. They may require parties to an agreement to extend any concessions or benefits to all members unconditionally, or to pass on such concessions or benefits only if they are reciprocated.

The following are examples of various types of trade agreements:

- | | |
|----------------------------------|---|
| • Bilateral, single product | Australia's international air services arrangements |
| • Bilateral, all products | Australia–New Zealand Closer Economic Relations Agreement |
| • Regional, single product | Convention for the Conservation of Southern Bluefin Tuna |
| • Regional, all products | APEC Bogor Declaration |
| • Multilateral, single product | Universal Postal Union |
| • Multilateral, multiple product | General Agreement on Trade in Services |

The Chicago Convention resulted in the multilateral exchange of the first two freedoms through the International Air Services Transit Agreement of 1945 (IASTA). All other freedoms, including all rights for parties that were not signatories to the IASTA, are negotiated on a bilateral basis.

As a signatory to the IASTA, Australia is required to grant first and second freedom rights to the carriers of some 100 other signatory nations (BTCE 1994).

However, it can only establish additional rights by negotiating ASAs with other countries.

The existing bilateral system has some advantages over other approaches to the negotiation of international air services through regional or multilateral fora. Bilateral agreements can be tailored to the characteristics of certain markets. Such negotiations also enable a country to exert pressure on restrictive countries to liberalise their arrangements by withholding access to its own market. They also permit pairs of countries to experiment with liberalisation of air services and to demonstrate to other countries the benefits of more liberal arrangements.

The fundamental principle of the bilateral system is that of bilateral reciprocity whereby countries exchange rights on the basis of ‘equality of opportunity’. This essentially means that countries agree to exchange rights which will enable their carriers to obtain access to foreign markets to the same extent as foreign carriers are able to gain access to their markets.

ASAs generally contain provisions that restrict the services allowed by international carriers between sets of countries. These provisions relate to market access (including freedoms granted and route specification), capacity and frequency, and a method for determining or approving tariffs. There has been an increasing trend to remove some of these restrictions (Section 3.2).

Most ASAs also require airlines designated by each party to be ‘substantially owned and effectively controlled’ by the country or the nationals of that country. There is no internationally accepted definition of what constitutes ‘substantial ownership and effective control’ but most countries have legislation that defines their own criteria. The criteria must be acceptable to both parties to the bilateral agreement. In conjunction with this provision, ASAs permit bilateral partners to refuse, revoke, suspend or impose conditions on the authorisation of air services by carriers owned and controlled by other countries not party to the bilateral agreement. They prevent these carriers from using and benefiting from the rights established under those arrangements. They also restrict the ability for carriers from one country to provide services on behalf of another country.

The ownership and control provisions of ASAs effectively entrench the bilateral system of negotiation by restricting the ability of airlines to merge across national boundaries. The bilateral system in turn entrenches the ownership and control provisions — a change in the requirements by one party has to be acceptable generally to all bilateral partners. As DTRD noted:

... ownership and control is the true restriction in bilateralism. Capacity is relevant but what keeps an ASA bilateral — and keeps out a potential competitor, who may otherwise enter through acquisition is — ownership and control. ... The fear that

foreign carriers might obtain unreciprocated access to local markets is why ownership and control is likely to remain an issue in air services arrangements until bilateralism itself is replaced (sub. 60, p. 7).

ASAs also include a series of ‘doing business’ rules such as rights for airlines to repatriate funds, be exempt from customs and excise duties, and gain access to terminals and ground handling services. These provisions generally facilitate the operation of international air services between countries by seeking to minimise the potential for anticompetitive practices.

3.2.1 Australia’s ASAs

Australia currently has 51 ASAs with its bilateral partners. They typically include provisions such as:

- a guarantee of fair and equal opportunity for airlines designated under the agreement;
- agreement that designated carriers are substantially owned and effectively controlled by nationals of the contracting parties;
- agreed principles for regulating capacity and tariffs;
- rights granted for the designated carriers of one party to conduct business in the country of the other party;
- mutual recognition of airworthiness procedures;
- agreement to cooperate on aviation security;
- exemption from import duty by both parties for aircraft fuel, spare parts and supplies used by airlines of the other party;
- descriptions of the routes over which agreed services can operate (usually contained in an annex); and
- an agreement that both parties will amend the air services arrangements to conform with any matter covered by any multilateral agreement into which both parties have entered (DTRD sub. 33).

Whilst Australia’s ASAs contain a number of provisions which facilitate the operation of international services between Australia and other countries, they also contain a number of restrictions. The key restrictions in the ASAs which affect the efficiency of airlines are set out in Box 3.3. The main provisions of Australia’s ASAs and the capacity available are detailed further in Appendix E. The economic effects of the current bilateral arrangements are examined in Chapter 6.

Box 3.3 Regulatory constraints within Australia's ASAs

Ownership and effective control. Designated carriers are generally required to be 'substantially owned and effectively controlled' by the party (the government) or nationals of the party before being able to use rights negotiated under the agreement. Foreign ownership and control limits on Australian airlines are set out in the *Qantas Sale Act 1992* and the *Air Navigation Act 1920*.

Capacity constraints including frequency controls. Limits on the overall capacity to be used by Australian and foreign designated carriers are contained in all ASAs except with New Zealand and the United States. These limits are generally specified in terms of the number of flights, units or seats that a country's carriers may operate each week. Most ASAs allow capacity to be used for passengers or freight, although some have dedicated freight capacity. Some ASAs also contain restrictions on both the overall capacity and the frequencies that carriers may operate.

Fifth and seventh freedom rights. Many of Australia's ASAs contain fifth freedom rights but they are generally limited in terms of quantity, and the third countries to which they apply. There are no seventh freedoms in any of Australia's ASAs.

City designation. Designated carriers can use capacity only to provide air services to particular cities, or a choice of cities specified under the ASA. Australian carriers can use capacity from any point in Australia to a list of specified points (or a choice of points) in the bilateral partner's country. Similarly, foreign carriers are normally granted rights to fly only to specified points within Australia.

Cabotage. Cabotage refers to the right to carry traffic internally. Australia has granted cabotage rights to foreign carriers under its ASAs with India and New Zealand only.

Stopover rights. These rights allow foreign airlines to carry their own international passengers between two points within Australia. They are included in several ASAs.

Codesharing. Codesharing refers to the ability of an airline to sell seats on a flight operated by another airline. Provisions for codesharing are included in half of Australia's ASAs. However, for an airline to codeshare, it must also have the underlying market access and capacity rights under the relevant ASA.

Tariff regulation. All ASAs (with the exception of Australia's ASA with New Zealand) require aviation authorities to approve or disapprove of tariffs. Some ASAs require the airlines to use IATA processes in formulating tariffs; others encourage the designated airlines of the two parties to agree on tariff levels.

3.3 Regulation of non-scheduled services

Non-scheduled services are air services which are not listed in a published timetable. Generally they are operated on an irregular or infrequent basis.

Charter flights are one form of non-scheduled services. The terms ‘non-scheduled’ and ‘charter’ are often used interchangeably.

In some parts of the world, non-scheduled services provide significant competition to scheduled international services. Charters in Europe and across the Atlantic account for a significant portion of the overall market for travel. They have developed partly as a response to market circumstances, such as the high seasonality of passenger traffic and freight, and partly as a response to some regulatory constraints on scheduled services, including the high fares supported by these constraints.

In Australia, non-scheduled services play an important role in meeting increased demand for export freight capacity where scheduled services are unable to meet exporters’ requirements, particularly during seasonal peaks. They have also enabled carriers to develop new markets, particularly to places not served by scheduled international services.

The regulation of non-scheduled services is generally outside the bilateral system which tends to cover scheduled passenger and freight services only. However, some arrangements such as the US ‘open skies’ agreements contain provisions relating to non-scheduled services. A few regional agreements also cover non-scheduled services. These include the 1956 Multilateral Agreement on Commercial Rights of Non-scheduled Air Services in Europe and the 1971 Multilateral Agreement on Commercial Rights of Non-scheduled Air Services Among the Association of South–East Asian Nations (ASEAN) (ICAO 1996a).

The authorisation of charter services remains at the discretion of individual countries (ICAO 1996a). Thus, proposed charter services must generally satisfy the charter requirements of both countries independently before they can commence operations.

The national regulation of charter services varies among countries. Whilst many countries, particularly tourist destinations, readily authorise incoming charter flights, others have adopted a more restrictive approach (Doganis 1991).

In Australia, the Air Navigation Act establishes the legislative framework for international charter services. The Department of Transport and Regional Development (DTRD) is responsible for approving the operation of charter services. In the past, Australia’s charter policy has been criticised for being restrictive (IAC 1989). However, the Commonwealth Government liberalised its charter guidelines in June 1996 to enable certain categories of charter flights to obtain automatic approval (Chapter 4). A number of participants acknowledged that these changes had alleviated many of the constraints on the operation of charter services to and from Australia.

3.4 The role of ICAO and IATA

The operations of two main international bodies, namely ICAO and IATA, influence the regulation of international air services.

3.4.1 International Civil Aviation Organization

The 1944 Chicago Convention resulted in the establishment of ICAO.¹ A specialised agency of the United Nations, its main functions are to develop international standards and to recommend practices for the safe and efficient conduct of international air transport (BTCE 1994). These standards cover issues related to safety, aeronautical communications, meteorology, airworthiness, operations, environmental standards and security. It also has a significant role in collecting and disseminating information on the operation of international air services.

While the Chicago Convention established a role for ICAO in economic regulation of international air transport, ICAO generally has not focused on this area. Nevertheless, it has held worldwide air transport conferences which have provided useful fora for considering economic regulatory issues (Chapter 4).

ICAO also has an administrative role in the ASA process. Copies of all ASAs, enactments, terminations and other related documents are required to be registered with ICAO. Currently, over 3000 bilateral agreements between 185 member states are registered (DTRD sub. 33).

3.4.2 International Air Transport Association

IATA is a trade association representing the interests of over 230 scheduled airlines. IATA provides a forum for setting various technical, operational and commercial standards. This allows carriers to coordinate scheduling of flights and to interline.² It also operates a clearing house for inter-airline debts arising from interline traffic. Non-IATA member airlines are able to pay to use the clearing house service.

Traditionally, air fares and cargo rates were negotiated and agreed at IATA traffic conferences and subsequently approved by governments under ASAs. IATA (sub. 8) indicated that the function of the IATA tariff conferences has

¹ ICAO was formally established in 1947 following ratification of the Chicago Convention by the required number of 26 states. It superseded the Provisional International Civil Aviation Organization (Ryan 1984).

² Interlining involves connecting passengers between two airlines on the same ticket.

been modified to focus on ‘reference fares’, mainly to facilitate interlining and to determine how money from the sale of an interline ticket should be divided between the airlines operating the service. As a result, the fares negotiated and agreed at IATA tariff conferences usually do not reflect the final fares paid by consumers.

Participation in fare coordination was a condition of IATA membership until the late 1970s. Pressures contributing to the declining importance of IATA traffic conferences as a means of negotiating fares included the move in 1978 by US antitrust authorities to question the exemption granted to IATA traffic conferences and other agreements from US antitrust laws. Subsequently, IATA agreed to allow optional participation in tariff coordination.

Approximately 100 of IATA’s 230 members participate in tariff coordination (IATA 1998a). Four Australian airlines (including Qantas and Ansett) are IATA members and both Qantas and Ansett participate in IATA tariff conferences.

3.5 State assistance to airlines

A number of governments provide assistance to their national airlines through the provision of state aid or subsidies. In some cases, the assistance provided by governments has not been limited to direct funding, but has been provided through other means such as loans made on non-commercial terms, discounts or exemptions on charges for airport services and navigation and landing fees, discounts on the price of, or preferential arrangements for the supply of fuel, monopoly handling rights, duty free concessions at the airline’s base airport granted without competitive bidding, debt forgiveness and fiscal privileges (ICC 1995). Of course, the bilateral system itself provides substantial assistance to national airlines in their own markets — but simultaneously limits participation in other markets.

State assistance to national carriers potentially distorts competition and reduces the productive efficiency of airlines.³ It may enable less efficient airlines to remain in the market.

Obtaining estimates of total direct subsidies and implicit subsidies to national airlines is difficult for a number of reasons. First, different accounting methods and reporting practices make it difficult to determine whether airlines have received government subsidies. Second, airlines have an incentive not to report government subsidies or to signal to their competitors that they are receiving

³ In some cases, subsidies may have broader social or community benefits, for example, where they are used to support services to remote or other areas.

assistance. ICAO (1996) data indicated that total direct subsidies to scheduled airlines totalled US\$100 million in 1995, but this appears to be a substantial underestimate. In Europe, where more stringent requirements exist for notification and authorisation of aid, various forms of government direct and indirect aid to national airlines totalled more than US\$7 billion in 1994 (ICC 1995). Third, airlines may receive assistance in non-monetary forms which may be difficult to quantify.

Qantas highlighted some of the difficulties involved in quantifying the range of assistance measures sometimes offered to airlines:

... it's often very hard to prove or to quantify the degree of assistance and it can take many forms, ... [from] billion dollar capital injections ... policies which very much favour and encourage the development of the domestic airline ... to policies on taxation and the financing of aircraft ... also rules which may govern ancillary parts of the industry, such as whether there are monopolies at airports in handling agencies and catering operations and so on (transcript, pp. 463–4).

The Comité des Sages (1994) argued that capital injections and state aid to EU airlines had contributed to overcapacity and uneconomic pricing in the EU market. It recommended that subsidies to EU carriers be disapproved if incompatible with normal commercial practices. It urged the European Commission (EC) to enforce strictly the provisions of the Treaty of Rome relating to state aid and to set clear guidelines for evaluating any exceptional application for state aid. The Comité recommended a number of conditions for such approvals including:

- direct operating aid be accepted only as aid of a social character or as a public service obligation;
- other aid be authorised only if it forms part of a comprehensive restructuring program; and
- a second round of restructuring aid be allowed only under exceptional circumstances, unforeseeable and external to the company (the so called 'one-time-last-time' principle).

The EC largely adopted the Comité's recommendations and has implemented regulations which establish a process for the notification and authorisation of state aid to EU carriers. To date, the EC has allowed assistance to a number of loss-making EU airlines (Table 3.1).

Approval of these subsidies was given subject to a number of conditions. For example, the airlines were required to restructure their operations and were restricted from expanding capacity. The EC has scrutinised the restructuring programs of several state-owned airlines, including Aer Lingus, Air Portugal,

Air France and Olympic Airways and authorised aid subject to a number of stringent conditions.

Table 3.1 Subsidies approved by the EC to European airlines, 1991 to 1996

<i>Airline</i>	<i>Subsidy US\$ million</i>	<i>Date</i>
Sabena	1 800	August 1991
Iberia	1 200	May 1992
Aer Lingus	250	December 1993
Air Portugal	1 100	July 1994
Olympic	2 300	July 1994
Air France	3 700	July 1994
Iberia	690	January 1996

Source: OECD (1997, p. 79).

In the United States, an explicit objective of its international air transportation policy is to ensure fair competition and a level playing field by eliminating market place distortions such as government subsidies (DOT 1995). The United States has adopted a principle of not subsidising its own airlines, except under the Essential Air Services (EAS) program which provides subsidies to commercially unsustainable regional routes. Subsidies paid under the EAS program have been reduced from US\$121.7 million in 1981 to US\$34.8 million in 1992 (Hanlon 1996). However, the United States provides other forms of assistance through the 'Fly America' policy which requires US government agencies to use air services provided by US airlines when available.⁴

In November 1994, ICAO proposed a regulatory arrangement relating to state aid (ICAO 1994). Each member state would recognise the potential for state aid to distort trade in international air services and support unfair competitive practices and would agree to take transparent and effective measures to ensure that any state aid did not adversely affect other competing carriers. However, the proposal was not adopted by member states.

The provision of state assistance to other carriers which compete against Australian carriers potentially undermines the effectiveness of liberalisation under the bilateral system. Seeking commitments in ASAs from bilateral partners to restrict significant assistance provided to their national carriers is

⁴ The US bankruptcy code also contains generous provisions which act as an indirect form of state assistance for financially troubled carriers (Findlay, Hufbauer and Jaggi 1996).

one way of reducing such distortions. Chapter 9 discusses further the importance of restricting government assistance to national carriers as part of a program of liberalising ASAs.

3.6 Application of competition policy to international air services

Certain aspects of international air services provision raise a number of issues relating to the application of competition policy. Restrictions in ASAs, alliances and mergers between carriers, access to airport infrastructure including landing and takeoff slots and ground handling services (Chapter 8) and access to computer reservation systems may all potentially have deleterious effects on competition.

Where airlines operate on a global basis, their actions may be influenced by competition legislation in a number of different countries. However, there are a large number of countries with no competition laws at all. The extent to which there are significant differences in legislative requirements across those countries may impose costs on airlines in terms of uncertainty and compliance. It may also result in inconsistent conclusions being reached by regulatory authorities about the effect of a particular action on competition.

The Director-General for Competition in the EC highlighted some of the major concerns related to differences in competition laws worldwide:

Action in some countries against anticompetitive practices may be less rigorous than in others. This may have foreclosure effects in some markets and result in trade disputes undermining the positive results of efforts deployed in multilateral fora to open up international trade. Furthermore, antitrust authorities may lack the necessary instruments to deal with practices which affect competition on their territory but are organised in third countries. Finally, remedies adopted by an antitrust agency in order to ensure competition within its jurisdictions may seem legitimate, but may sometimes adversely affect the interests of another country. They may also directly conflict with remedies adopted in the same case by another authority (Schaub 1998, p. 2).

A number of cases involving mergers and agreements in the airline industry have highlighted the uncertainty and costs associated with obtaining regulatory approval across a number of jurisdictions. First, in relation to the Boeing/McDonnell Douglas merger, differences in approach between the EC and the US Federal Trade Commission resulted in different decisions by the two regulatory authorities. This case highlighted the limited ability to resolve conflicts where there is a significant divergence in analysis and conclusions between national competition authorities (Schaub 1998).

More recently, the proposed British Airways/American Airlines alliance has also highlighted some of the difficulties associated with obtaining approval from regulatory authorities in several countries. The airlines initially sought regulatory approval for the alliance in July 1996. In July 1998, the EC approved the alliance subject to a number of conditions, including the surrender of slots by British Airways and American Airlines at Heathrow Airport (EC 1998). However, the airlines are still awaiting approval from regulatory authorities in the United States and the United Kingdom. In contrast, the Qantas/British Airways alliance required authorisation from the Australian competition authority but did not require authorisation from authorities in the United Kingdom (OECD 1997).

ASAs generally include provisions aimed at promoting competition or reducing the potential for anticompetitive practices in the airline industry. Australia's ASAs generally include a fair competition clause and/or a commercial opportunities clause which seek to remove potential impediments to market access and improve the effectiveness and/or profitability of international air services. These provisions often refer to commercial and related activities such as ground handling, currency conversion and remittance of earnings, employment of non-national personnel, sale and marketing of international air transport and computer reservation systems. However, ASAs do not generally include provisions dealing specifically with the application of competition law.

Qantas argued that:

The absence internationally of anything like an agreed set of competition rules, or policy principles, is a strong reason to maintain the existing arrangements under which countries are free to pursue competitive outcomes on an agreed bilateral basis (sub. 25, p. 53).

The OECD argued the case for international convergence of competition rules:

At the international level, the policy challenge is to ensure that differences in competition laws and enforcement standards do not substantially distort competition. In the longer term, it would be desirable that such differences gradually diminish with the convergence of legislation (1997, p. 17).

At the 1994 World Wide Air Transport Conference, there was wide support for a mechanism which would protect the aviation industry against anticompetitive actions as part of the global approach to market liberalisation. ICAO members at the Conference agreed to:

- the development of a multilateral code of conduct under which unfair capacity and pricing practices would be proscribed; and
- a specially created dispute settlement mechanism (ICAO 1994).

However, there has been little progress in this regard.

3.7 Regulation of safety

The Chicago Convention establishes a mechanism for standardising approaches to safety and security in international aviation through ICAO. ICAO has been primarily responsible for the development of international standards, recommended practices and procedures covering technical fields of aviation for worldwide application. It is the responsibility of individual countries to ensure that the ICAO minimum standards are applied.

ASAs generally incorporate safety provisions which recognise the responsibility of each country for ensuring that ICAO safety standards are met. The bilateral partners also agree to recognise the certification and licensing of carriers registered in each country.

Most of Australia's ASAs provide for Australia and its bilateral partner to request consultations if there are concerns about the safety standards of aeronautical facilities, aircrew, aircraft and the operation of designated airlines. If airlines are found not to comply with ICAO standards, Australia (or its bilateral partner) can request corrective action to ensure conformity. Ultimately, countries can revoke or suspend authorisation for designated carriers to use entitlements under the ASA if they fail to comply with the laws and regulations applied by aeronautical authorities in accordance with ICAO standards.

DTRD argued that these provisions are generally sufficient to ensure minimum safety standards are met:

The 'country of convenience' problem endemic in shipping has been avoided to date, as ownership and control requirements make it clear who the carrier is responsible to for safety; and with a government-managed safety consultation mechanism in the bilateral agreements. Ultimately, there is an ability to deny access, should there be doubts about safety (sub. 33, p. 35).

Some countries, concerned about the level of safety observed by some carriers have incorporated additional provisions within ASAs to enable them to assess the extent to which ICAO standards are being met by foreign airlines. The United States and EU member countries have sought to include provisions in their ASAs which allow them to inspect foreign aircraft when they are within their territory. The provisions generally enable them to board the aircraft to check the validity of the aircraft and crew documents and to check the condition of the aircraft. DTRD has indicated that such provisions are expected to be inserted into Australia's ASAs with a number of countries, including Germany, Greece, Luxembourg and the United Kingdom.

In Australia, the Civil Aviation Safety Authority (CASA) is responsible for issuing Air Operators Certificates to Australian and foreign airlines operating international air services to and from Australia as well as ensuring compliance

with safety regulations and standards. Since December 1996, CASA has been inspecting foreign aircraft engaged in commercial passenger and freight services to Australia as part of the international safety oversight program (CASA 1997). The inspections are designed to ensure that aircraft and crew documentation is in order and that there are no obvious deficiencies with the aircraft. CASA has also proposed bilateral airworthiness arrangements with aeronautical authorities in China and Malaysia.

Chapters 6 and 9 discuss in greater detail the relationship between deregulation and liberalisation of international air services and airline safety.

4 TRENDS IN LIBERALISATION OF AIR SERVICES

Governments around the world have been liberalising their aviation policies including their ASAs. Over the past decade the Commonwealth Government has changed its aviation policy to enhance competition and efficiency in Australia's international air services. Substantial national benefits have resulted.

This chapter examines the international trends towards liberalisation and recent changes to Australia's aviation policy, both domestically and internationally, which have influenced international services.

4.1 International trends towards liberalisation

Many governments in recent years have moved to deregulate domestic aviation markets through privatisation and to eliminate government subsidies to airlines. A number of countries have also sought to liberalise various aspects of their bilateral arrangements — for example, the United States has pursued so called 'open skies' arrangements on a bilateral basis. Countries in the European Union, South America, APEC and ASEAN have also pursued liberalisation on a plurilateral and regional basis to various degrees. On a multilateral basis, the General Agreement on Trade in Services (GATS) has some very limited application to air transport.

4.1.1 Unilateral liberalisation

Unilateral liberalisation of domestic aviation markets has been pursued by many countries. Domestic deregulation occurred in the United States in 1978 and commenced in Europe in the late 1980s. More recently, other countries including Australia have also sought to reduce restrictions on competition under domestic legislation.

Privatisation of government-owned airlines has been a significant unilateral initiative by many countries. The trend towards privatisation of airlines began in the 1980s (Hanlon 1996), and evidence suggests that privatisation has led to greater efficiency and competitiveness of airlines. Forsyth (1998) reports improvements in productivity for British Airways, Air Canada and Qantas in anticipation of privatisation and after it was implemented.

Following privatisation, many governments continued to support their airlines by funding commercial losses. However, some governments have also sought to reduce or eliminate government subsidies to airlines so as to reduce distortions to competition. As noted earlier, the EC introduced strict rules in 1993 to cover the provision of state aid to airlines.

The current Asian financial crisis has placed the governments of Malaysia, Indonesia, the Republic of Korea and Thailand under considerable pressure to undertake reform of their air services industries. The terms of the International Monetary Fund adjustment packages introduced for some of these countries require privatisation of a certain number of state-owned enterprises (which may include airlines) and other reforms to reduce their reliance on government funds (Ballantyne et al. 1998). The governments of the Republic of Korea and Thailand have indicated that they will relax limits on foreign investment in their airlines (Knibb 1998).

The crisis and subsequent International Monetary Fund packages may create additional pressures on traditionally restrictive Asian economies to liberalise their aviation markets. The Department of Industry, Science and Tourism argued:

The current Asian crisis presents an important opportunity for Australia to progress liberalisation regionally and bilaterally. ... This situation should therefore provide useful negotiation leverage for liberalisation (ensuring better access to third markets) and place Australia in a better position to benefit from economic recovery in these markets in the medium term. The success of the negotiated outcome with Thailand, in February 1998, underlines this point (sub. 31, p. 23).

DTRD (sub. 60) considered that the liberal terms of the recently negotiated ASA with Thailand were more the result of years of negotiations rather than pressure created from the economic crisis. However, Thai press reports suggest that there has been a growing consensus on the need to change Thailand's aviation agreements with other major destinations, including Australia, the United States and the United Kingdom, in order to cope with changed economic circumstances (Khompeera 1998).

4.1.2 Bilateral liberalisation

There has been an increasing trend since the late 1970's towards the liberalisation of bilateral arrangements. Following deregulation of the US domestic market in 1978, the United States negotiated more liberal ASAs with many countries to promote competition and to reduce the extent of government involvement. These arrangements sought to promote free determination of capacity without government interference, reduce route restrictions, establish

multiple designation of airlines, remove the system of double governmental approval of tariffs, facilitate the operation of charter flights, and promote fair and competitive practices by airlines (Dresner and Tretheway 1992a).

Many other countries have since sought to negotiate similar provisions in their bilateral arrangements. However, there are still many countries that remain relatively restrictive in their approach to bilateral negotiation.

A number of countries have pursued liberalisation through so called 'open skies' agreements. Qantas (sub. 67) argued that the term 'open skies' has no universally accepted meaning, but the term has become so prevalent that it symbolises the debate about the future direction of aviation policy. These open skies policies have been implemented on a bilateral basis, within the general structure of bilateral negotiations and agreements.

In the United States, these so called 'open skies' agreements have generally incorporated unrestricted rights for both US and bilateral partner carriers to operate between the two countries, including to intermediate and beyond points (see below). However, they have not included cabotage rights, have not relaxed the limits on foreign ownership of US carriers and have not provided the right of establishment for foreign airlines within the United States. Nor have they removed the advantages conferred on US carriers by virtue of the 'Fly America' policy.

New Zealand has also adopted a bilateral 'open skies' policy, agreeing on liberal arrangements with Brunei, Chile, Singapore, Malaysia, the United Arab Emirates and the United States. The New Zealand External Policy Advisory Committee (sub. 76) stated that the New Zealand open skies model uses the US model as a basis and incorporates additional elements of liberalisation which it sees as desirable (for example, New Zealand is prepared to negotiate seventh freedom passenger and cabotage opportunities. These rights are included in the New Zealand–Brunei open skies agreement).

The New Zealand–Singapore agreement permits greater flexibility in foreign ownership. It removes the requirement for majority national ownership of carriers, although it still retains the requirement for national control (Air New Zealand sub. 6). New Zealand also has a very liberal arrangement with Australia under the Single Aviation Market which provides for unrestricted capacity to and from and within each country (including cabotage). However, restrictions on fifth freedom (beyond) rights for carriers remain.

Table 4.1 illustrates some of the major differences between a number of key bilateral air services arrangements. Relations between Australia and New Zealand are described in Section 4.2.4.

Table 4.1 Rights granted under key bilateral air services arrangements

<i>Features</i>	<i>Australia–New Zealand</i>	<i>Australia–Singapore</i>	<i>United States–Singapore</i>	<i>New Zealand–Singapore</i>
Unrestricted routes	✓	✗	✓	✓
Unrestricted third and fourth freedoms	✓	✗	✓	✓
Unrestricted fifth freedoms	✗	✗	✓	✓
Seventh freedoms	✗	✗	✗	✗
Cabotage	✓	✗	✗	✗

US ‘open skies’ agreements and antitrust immunity

Since 1992, the United States has adopted an ‘open skies’ policy based on liberal ASAs. Whilst still negotiated under the bilateral framework, the US ‘open skies’ agreements have generally incorporated:

- open entry on all routes between the bilateral partners;
- unrestricted rights to operate between any international gateways in the United States and participating countries, including intermediate and beyond points;
- unrestricted capacity, frequency and aircraft on all routes; and
- flexibility in setting fares within certain guidelines.

In addition, they provide for:

- liberal charter and cargo arrangements;
- the ability of carriers to convert earnings into hard currency and return those earnings to their homelands without restriction;
- open codesharing opportunities;
- rights for carriers to perform their own ground handling in the partner country;
- the ability of carriers to enter freely into commercial transactions related to their flight operations; and
- a commitment for non-discriminatory operation of, and access to, computer reservation systems (Subcommittee on Aviation 1997).

As noted above, the US ‘open skies’ agreements have not granted cabotage — the right for foreign carriers to fly domestically within the United States. Nor has the policy been accompanied by the right of foreign carriers to increase their ownership of US airlines beyond a maximum of 25 per cent of airline voting stock (Subcommittee on Aviation 1997).

In 1995, the US Department of Transportation (DOT) established its strategy for pursuing these more liberal ‘open skies’ arrangements (DOT 1995). It extended invitations to enter into open aviation agreements to a number of countries that it believed shared its vision of liberalisation, offering important traffic flow potential for its carriers. To date, the United States has signed a total of 30 ‘open skies’ agreements with a range of countries in Europe, Central America and South America and the Asia–Pacific region. Australia is not a signatory to a US open skies agreement. Issues associated with this are discussed in Chapter 9.

US aviation policy appears to have recognised the importance of having unrestricted market access as a competitive safeguard against the potentially adverse competitive effects of airline alliances. Indeed, the negotiation of ‘open skies’ agreements has often been linked to the granting of antitrust immunity for alliances — for example, in January 1993, the DOT granted antitrust immunity to Northwest and KLM to enable them to form an alliance. A major factor influencing the decision to grant the airlines immunity was the existence of the US–Netherlands ‘open skies’ accord which allowed airlines from both countries unrestricted entry and capacity rights between and beyond both countries. Since then, DOT has approved other alliances between its carriers and the carriers of other countries which have signed ‘open skies’ agreements with the United States.

DTRD expressed concerns about the US practice of granting antitrust immunity for alliances in exchange for agreement to an open skies policy. It stated that ‘US open skies packages include an exemption from its antitrust laws’ (DTRD sub. 33, p. 28). Havel (1997) argued that:

... although antitrust immunity for inter-carrier cooperation is not an element *per se* of the model open skies relationship, this vestigial DOT [Department of Transportation] authority has recently acquired prominence as a pivotal factor in persuading Germany to subscribe to a liberalised air transport treaty. Unfortunately, the use of the bait of immunity ... may have become a template for US international aviation policy that will be difficult for US negotiators to decline (p. 22).

This view would seem to find support in that recent open skies agreements between the United States and a number of Central and South American countries appear to have created an expectation of DOT’s automatic approval of international alliances between carriers. The chief executive officer of the

TACA group of Central American airlines¹ was reported recently as urging South American countries not to sign any more open skies agreements with the United States and putting pressure on Central American governments to rescind their open skies bilaterals following a two year delay in obtaining regulatory approval for the TACA/American Airlines alliance (Walker 1998). The Chilean Government has also been reported as stating that its acceptance of an open skies deal with the United States is conditional on the approval of an immunised alliance between LanChile and American Airlines (Walker 1998).

The Commission's understanding is that DOT's processes for considering the antitrust implications of international airline alliances examine among other things, the scope for competition from other carriers in response to the alliance. The official US position is that liberal or 'open skies' arrangements are a *prerequisite* for considering antitrust immunity for alliances which would otherwise be in danger of violating antitrust laws. An 'open skies' agreement thus would not *guarantee* that airlines of the two countries subsequently will be granted antitrust immunity.

The US Assistant Secretary for Aviation asserted this approach:

The presence of an open market and alliance agreements that are consistent with our antitrust laws provide us with the opportunity to consider requests for antitrust immunity. Nevertheless, they do not guarantee that we will grant it. We must also determine that the Department's immunity authority will be used for securing pro-competitive and pro-consumer benefits (Hunnicut 1998, p. 5).

The Commission is of the view that there needs to be a strict separation between open skies agreements and antitrust immunity or similar immunity. A commitment to open skies agreements between Australia and other countries should not hinge on a promise of, or be in exchange for, antitrust or similar immunity.

4.1.3 Plurilateral and regional liberalisation

Some agreements negotiated in recent years have sought to liberalise air services on a regional basis or among a small set of countries. The propensity for countries to negotiate regional arrangements for international air services is partly a reaction to some of the restrictive elements of the bilateral system. The most notable examples of regional or plurilateral agreements affecting air

¹ The TACA group consists of six Central American airlines from Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama. All of these countries signed open skies agreements with the United States in 1997.

transport include the creation of a free market for intra-EU air services and agreements within APEC and ASEAN.

European Union

In 1986, member countries in the EU² agreed to create a single European market for the exchange of goods, services (including air transport services), labour and capital. The date for the commencement of the single European market was 1 January 1993. The European Commission (EC) has primary responsibility for developing and implementing the regulations for the operation of the single market, including provisions relating to air transport.

The regulation of intra-EU air services was previously characterised by relatively restrictive bilateral arrangements between each of the member states. The EC introduced three packages of reforms between 1987 and 1993 to harmonise existing regulation of EU air services and to introduce greater competition for international air services between EU airlines. The measures included establishing common licensing standards, allowing airlines to set fares freely without requiring government approval, and removing restrictions on third, fourth and fifth freedom services.

Since 1 April 1997, EU airlines have faced no restrictions on cabotage (that is, the right to operate domestic services within any EU country). The changes essentially enabled airlines to be registered as 'EU airlines' and thereby to operate services unconstrained within and between EU member countries.

The measures undertaken by the EU have so far been largely restricted to the operation of air services between the member states. The air transport regulations have been extended to all European Free Trade Association (EFTA) states (except Switzerland) since 1994 as part of the European Economic Area.³

Arrangements between individual EU member states and other countries continue to be governed largely by the bilateral framework. Despite EU airlines now registering as EU carriers, the capacity negotiated under bilateral arrangements between countries of the EU and countries outside the EU is not available to all EU carriers.

² Previously known as the European Community, the European Union currently comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

³ The European Free Trade Association currently comprises Iceland, Liechtenstein, Norway and Switzerland. The European Economic Area comprises the EU and EFTA countries, except Switzerland.

The EC is seeking to exercise its authority to negotiate aviation agreements as a single entity on behalf of all EU carriers. In March 1998, the EC announced legal action against eight member states which have concluded aviation agreements with the United States. The EC argued that these member states, by unilaterally granting US carriers traffic rights to and from and within the EU and obtaining exclusive rights for their own carriers to fly from their territory to the United States, have distorted competition and cut across the single market concept of the EU. On the other hand, the United States may have an advantage in negotiating separately with each of the member states, rather than with the EC representing the EU as a whole. Many of the EU member states may also find it advantageous to continue to negotiate separately.

APEC

The leaders of APEC economies⁴ signed the Bogor Declaration in November 1994, in which they agreed to work towards the goal of free and open trade and investment by 2010 for industrialised economy members and by 2020 for the developing economy members (APEC 1994). In November 1995, member economies agreed on the Osaka Action Agenda which outlined a range of liberalisation, facilitation and economic and technical cooperation initiatives designed to give effect to the Bogor Declaration (Ministry of Foreign Affairs and Trade (Japan) 1995).

Some APEC governments, such as New Zealand, are of the view that the Bogor Declaration implies that air services within the APEC region must be liberalised by 2010 (or 2020 for less developed countries). If this is accepted as a valid interpretation of the Bogor Declaration, APEC governments will need to remove all restrictions on trade in air services and on investment in airlines, consistent with these timeframes. Whether such restrictions would need to be lifted against APEC members only or against all countries is not clear.

The full implications of Bogor remain unclear for air services, and indeed appear not to have been addressed in APEC fora. Nevertheless, under the liberalisation and facilitation and economic and technical cooperation components of the Osaka Action Agenda, members agreed on a number of initiatives on transportation. These included resolutions with respect to air transport. The Air Services Group of the APEC Transportation Working Group has identified prospects for liberalising international air services in eight areas:

⁴ The APEC member economies party to the Bogor Declaration are Australia, Brunei, Canada, Chile, China, Hong Kong, Indonesia, Japan, Malaysia, Mexico, New Zealand, Papua New Guinea, the Philippines, Singapore, the Republic of Korea, Taiwan, Thailand and the United States. Peru, Russia and Vietnam were admitted as APEC member economies in November 1997.

- air carrier ownership and control;
- tariffs;
- ‘doing business matters’ related to commercial operations of airlines;
- air freight;
- multiple airline designation;
- charter services;
- airline cooperative arrangements; and
- market access.

The APEC Transport Ministers in 1997 endorsed further consideration of the scope to apply APEC commitments to these eight areas. The Transportation Working Group reconvened the Air Services Group to develop these options further (DFAT sub. 52). However, there has been little tangible progress in developing air services liberalisation options in this forum.

Australia has strongly advocated to APEC members the separation of freight and passenger capacity and the removal of constraints on freight. It has proposed to develop a set of standard APEC air freight clauses for adoption in bilateral or plurilateral agreements. Despite freight being one of the less contentious issues, these suggestions have met with little response from some APEC members (DTRD sub. 33).

Despite APEC being a forum under which the liberalisation of air services could progress, the consensus required and the sensitivity of air services issues are likely to make substantial progress through APEC difficult in the immediate future (DFAT sub. 52).

ASEAN

ASEAN member countries⁵ agreed in 1992 to adopt the Framework Agreement on Enhancing ASEAN Economic Cooperation. This included a commitment to ‘enhance further regional cooperation to provide safe, efficient and innovative transportation and communications infrastructure network’ (ASEAN 1992).

Further to this commitment, in 1997 ASEAN agreed to an implementation program for the ASEAN Plan of Action in Transport and Communications. The program sought to introduce a regional competitive air services policy within ASEAN, including the removal of restrictions on frequency, capacity and aircraft type for point-to-point services between and within member countries. It

⁵ ASEAN currently comprises Brunei, Burma, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

was proposed that the liberalisation of air services within ASEAN would occur on a sub-regional basis initially, with the ultimate objective of an ‘open skies’ policy within the ASEAN region (ASEAN 1997).

Some progress has been made on a sub-regional basis — for example, in the South East Asian region, Brunei, Indonesia, Malaysia and the Philippines have liberalised air services within and between their less well developed provinces to stimulate trade and development in the East Asian Growth Area (DTRD sub. 33). However, DTRD (sub. 33) argued that this arrangement has not been a major stimulus for the market in this region because it is not connected under liberal arrangements with major traffic markets.

Nevertheless, given Australia’s proximity to South–East Asia the move towards more liberal policies within the ASEAN region may have implications for Australia, particularly for its prospects of achieving further liberalisation within the region. There may also be some scope for entering into plurilateral arrangements with a group of ASEAN countries.

4.1.4 Multilateral liberalisation

On a multilateral level, the General Agreement on Trade in Services (GATS) and ICAO have to date had some limited influence on international liberalisation of air services.

The GATS was negotiated in the Uruguay Round of multilateral trade negotiations which concluded in 1994. The round resulted in the establishment of the World Trade Organization (WTO), which encompasses among other agreements, the GATS and the General Agreement on Tariffs and Trade 1994 (GATT 1994). The GATS defines trade in services as the supply of a service:

- from the territory of one Member into the territory of any other Member;
- in the territory of one Member to the service consumer of any other Member;
- by a service supplier of one Member, through commercial presence in the territory of any other Member; and
- by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member (Article I).

Under the GATS, each WTO Member agrees to treat the services and service suppliers of any Member no less favourably than it does for like services and service suppliers of any other country (the Most Favoured-Nation principle).⁶

All WTO members are required to accept the GATS and GATT (1994) as parts of the 'single undertaking' outcome of the round. Nonetheless, Members have discretion over the industry sectors to which many GATS provisions apply.

The GATS has some limited application to air transport services. The Annex on Air Transport Services specifically excludes the application of the GATS to air traffic rights, however granted, and services that directly relate to the exercise of traffic rights. However, there are three services related to air transport to which the GATS does apply. These are aircraft repair and maintenance services, the selling and marketing of air transport services and computer reservation services. The application of many GATS provisions to these services is restricted to the extent that the services are listed or scheduled by members.

The Annex on Air Transport Services provides for periodic reviews (at least every five years) of developments in the air transport sector and the operation of the Annex. The first review is due in 2000, along with a review of the GATS itself. This will provide an opportunity to consider the further application of the GATS to air transport services.

Apart from the GATS, ICAO has provided a forum for discussing issues related to international liberalisation of air services. In particular, the 1994 Worldwide Air Transport Conference canvassed a number of important issues including:

- the prospects for eliminating, replacing or modifying ownership and control criteria for designated carriers;
- the future regulatory process including the scope for multilateral agreement on air services;
- structural impediments to air services created by various forms of state assistance and physical restrictions on access through, for example, slot allocation;
- the interrelationship between air services and the broader regulatory environment, for example, competition and environmental laws, taxes on air traffic, and trade agreements and arrangements; and
- regulation of 'doing business' matters such as airport ground handling arrangements, currency conversion and remittance of earnings, non-

⁶ Any exceptions to Most Favoured Nation had to be specified at the time the WTO came into operation in January 1995.

national personnel and the sale, marketing and distribution of air services including CRSs.

The Conference highlighted the difficulty of achieving agreement among member states on many of these issues. For example, in relation to the prospects for multilateral agreement on air services, member states concluded that:

Given the diversity of views and policies of States and the disparities in their economic and competitive situations, it was recognised that there was no prospect in the near future for a global multilateral agreement on the exchange of traffic rights. Support was however expressed for focusing work towards a multilateral agreement on 'soft rights', including 'doing business' matters which would benefit from uniform treatment while traffic rights would continue to be regulated by bilateral agreements and regional arrangements (1994, pp. 53–4).

4.2 Recent changes to Australia's aviation policy

Prior to 1989, Australia's international aviation policy was based on:

- strict separation of international and domestic aviation sectors;
- designation of Qantas as Australia's national carrier;
- government ownership of airlines in both domestic and international sectors; and
- tight regulation of both domestic and international aviation.

The Commonwealth Government has since made several significant changes to its air services policy which have influenced the structure, efficiency and competitiveness of the Australian international air services market. The major policy changes have included:

- domestic deregulation, including the abolition of the 'two airlines' policy and the privatisation of Australian airlines;
- relaxation of restrictions on equity investment in Australian airlines and the privatisation of Australia's government-owned airlines;
- multiple designation of Australian carriers and a re-focus of negotiations away from the interests of Qantas, towards the needs of all stakeholders;
- an agreement between Australia and New Zealand for a Single Aviation Market, allowing airlines from both countries to fly unrestricted within each country and across the Tasman;
- liberalisation of Australia's air freight and charter policy; and
- privatisation of most Australian airports (except airports in the Sydney region).

4.2.1 Domestic deregulation and privatisation

In October 1987, the Commonwealth Government announced that it would end the 'two airlines' policy in Australia and facilitate the introduction of competition for interstate services. Following this announcement, the Government renegotiated the recently granted long term domestic terminal leases held by Ansett and Australian Airlines at major domestic airports. It aimed to provide potential new carriers with the opportunity to obtain access to airport facilities after deregulation (DTC 1990). However, access to airport facilities has remained a significant issue (Chapter 8).

The domestic 'two airlines' agreement favouring Ansett Airlines and the government-owned Australian Airlines ceased on 30 October 1990. This enabled Compass Airlines to commence services on major domestic trunk routes. Following the entry of Compass, fares fell dramatically on many domestic routes as a fierce pricing war developed (BTCE 1993). Compass Airlines was unable to sustain heavy losses and became bankrupt in 1991. Another new airline also named Compass Airlines entered the market in 1992, but lasted only six months before going into voluntary liquidation.

Despite the failure of the two entrants, the deregulated market appears to have delivered benefits. DIST noted that:

... average domestic air fares decreased by 21.8 per cent in real terms between the September quarter 1990 and the March quarter 1996, following domestic deregulation of these services in late 1990. Domestic traffic growth has averaged 12.6 per cent between 1990 and 1995 compared with average growth of just 4.7 per cent for a similar period prior to deregulation (sub. 31, pp. 13–14).

A number of studies have examined the effect of deregulation on the Australian aviation market. For example, the BTCE (1991) concluded that the existence of Compass Airlines was a significant factor determining the depth of available discount fares in August 1991. In 1993, further research by the BTCE, examining a sample of 100 domestic routes in November 1992, supported this conclusion. It found that the depth of discount fares was partly determined by the number of airlines operating on a route (BTCE 1993).

Savage, Smith and Street (1994) also found evidence that travellers using discount fares received the greatest benefit from competition, although they found no evidence of a negative relationship between competition and either business fares or economy fares. Quiggin (1997) argued that domestic deregulation had helped reduce the average price of air travel (although only by about 1 per cent) and had generated improvements in service quality such as increased flight frequency, expansion of frequent flyer schemes and airport club lounges. He argued that the distributional effects of deregulation were unclear.

In February 1992, the Commonwealth Government announced further liberalisation of air services arrangements as part of its *One Nation* statement (Keating 1992). This included removing restrictions on equity investments between Australian domestic and international operators. This move facilitated the merger of the two government-owned airlines, Qantas and Australian Airlines, and effectively allowed Australian carriers to develop integrated domestic and international networks.

The merger strengthened the competitive position of Qantas internationally and enabled it to make more effective use of its aircraft and capacity and to develop domestic feeder routes. With the addition of domestic traffic, Qantas moved from 43rd to 21st in the world in terms of overall passenger boardings (Jaggi and Morgan 1997).

The competitiveness of Qantas was further strengthened in March 1993 when British Airways purchased a 25 per cent stake in the airline. This purchase was subject to conditions to ensure that the majority ownership and control of Qantas remained in Australia. The Commonwealth Government then sold the remaining 75 per cent of Qantas in a public float in July 1995.

4.2.2 Changes to foreign ownership and control requirements

Limits on foreign investment in international carriers are generally required for designated airlines to demonstrate compliance with bilateral requirements that they be ‘substantially owned and effectively controlled’ by the country or its nationals.

The Commonwealth Government’s decision to relax limits on foreign investment in Australian international carriers preceded the privatisation of Australian airlines. This allowed up to 49 per cent foreign investment in total, with a single foreign carrier holding limited to 25 per cent and total foreign carriers limited to 35 per cent.

The precise nature of the arrangements for ownership and control differs between Qantas and other Australian international carriers. The arrangements are established under separate pieces of legislation — the Qantas Sale Act and Air Navigation Act (Table 4.2). Foreign investment requirements for Australian domestic airlines are more liberal than those for Australian international airlines.

Table 4.2 Foreign investment requirements for Australian carriers

<i>Limits on equity</i>	<i>Qantas</i>	<i>Other Australian international carriers</i>	<i>Australian domestic carriers</i>
Aggregate equity held by all foreign persons	49 per cent	Demonstrated substantial ownership and effective control by Australian nationals	100 per cent (unless judged contrary to the national interest)
Aggregate equity held by foreign airlines only	35 per cent	35 per cent	40 per cent ^a
Equity held by a single foreign person/airline	25 per cent	25 per cent	Generally up to 25 per cent for foreign airlines flying to Australia ^a

^a The Commonwealth Government is prepared to consider foreign equity proposals in excess of these guidelines if the proposal is not contrary to the national interest.

Source: Qantas Sale Act and Air Navigation Act cited by DTRD (sub. 33, attach. 1).

There are also requirements for the control of Qantas and other Australian international airlines (Table 4.3). The arrangements generally apply similar requirements for the location of the airline's head office, the location of most operational facilities and the composition of the board. However, additional requirements prohibit Qantas from taking any action to incorporate outside Australia.

Issues related to the ownership and control requirements for Australian airlines, along with the implications of different arrangements for Qantas and other Australian domestic and international airlines, are discussed in Chapter 9.

Table 4.3 Control requirements for Qantas and other Australian international carriers

<i>Requirement</i>	<i>Qantas</i>	<i>Other Australian international carriers</i>
Head office	The head office must always be located in Australia.	The head office must be in Australia.
Board	At all times, at least two thirds of the directors must be Australian citizens. The director presiding at a meeting of the board of directors (however described) must be an Australian citizen.	At least two thirds of the Board members must be Australian citizens. The chairperson of the Board must be an Australian citizen.
Location of operational facilities	The majority must be located in Australia.	The operational base must be in Australia.
Other requirements	Qantas is prohibited from taking any action to incorporate outside Australia.	

Source: Qantas Sale Act and Air Navigation Act cited by DTRD (sub. 33, attach. 1).

4.2.3 Multiple designation and the IASC

Prior to 1992, Qantas was Australia's only designated international carrier. This restricted the ability of other existing and potential airlines to compete for capacity as an Australian international carrier.

The Commonwealth Government's February 1992 *One Nation* statement announced the decision to secure multiple designation of Australian capacity in all ASAs (Keating 1992). The implementation of a multiple designation policy enabled other existing and prospective Australian carriers to provide international air services.

Given the move to multiple designation and increased capacity, the negotiation of entitlements focused more on the needs of all interests including those of consumers, tour operators, industry and regions as well as those of other Australian carriers. The Commonwealth Government also sought to negotiate enhanced route and capacity entitlements ahead of demand to increase the opportunities for existing and potential carriers to operate international air services. It established the International Air Services Commission as a statutory body responsible for allocating capacity negotiated under Australia's ASAs (Chapter 7).

4.2.4 Australia–New Zealand relations and the Single Aviation Market

Australia and New Zealand agreed in 1992 to establish a Single Aviation Market (SAM) as part of the Australia–New Zealand Closer Economic Relations Trade Agreement. This was to include very liberal arrangements including an exchange of cabotage rights.

In a supporting move Australia and New Zealand signed a Memorandum of Understanding (MOU) in 1992 which amended the existing bilateral. The MOU immediately lifted capacity restrictions for air traffic between Australia and New Zealand, introduced multiple designation, and included the staged introduction of greater beyond rights up to a limit of 12 Boeing 747s per week by November 1994. It also committed the two governments to consult on the subsequent full exchange of beyond rights.

Under the MOU, both countries also agreed to consult on issues concerning the further implementation of the SAM including the exchange of cabotage rights, the ownership and control of designated airlines, and the possibility of forming a joint bloc for the purpose of negotiating international traffic rights. However, in November 1994 Australia withdrew an offer of additional beyond rights to New Zealand carriers and access to the domestic market (Findlay and Kissling 1997). This action soured relations between the aviation authorities of the two countries and delayed the signing of the SAM until 1996.

Despite these initial setbacks, the SAM has become Australia's most liberal bilateral arrangement. It authorises airlines from both countries to fly unrestricted within each other's territory and across the Tasman. Ownership of SAM airlines⁷ may be vested in either Australian or New Zealand nationals or both. The agreement has relaxed foreign ownership of domestic and trans-Tasman carriers indirectly and facilitated the subsequent foreign ownership of Ansett's domestic operations (Findlay and Kissling 1997). The SAM is the only arrangement (except for an old arrangement with India) under which Australia allows cabotage by foreign carriers. However, New Zealand carriers have not used cabotage rights. Instead Air New Zealand has sought access to the

⁷ Airlines operating in the Single Aviation Market must meet the ownership and control requirements of the agreement, or be approved by the ministers responsible for civil aviation in the two countries. They must also meet operational requirements covering security, insurance, noise and operational authorisations from both countries. The ownership and control requirements include at least 50 per cent ownership and effective board control must belong to the nationals from either country, at least two thirds of board members must be nationals of either country, the chairperson of the board must be a national of either country, and the head office and operational base must be in either country.

Australian domestic market through its equity investment in Ansett Australia and an extensive alliance and codesharing agreement.

The SAM significantly liberalises air services between the two countries, but does not completely override the ASA between Australia and New Zealand. Beyond rights for both Australian and New Zealand carriers are still determined by the ASA and subsequent understandings including the 1992 MOU. The SAM arrangements include the commitment to make every effort to conclude a new air services treaty which would reflect the terms and conditions of the SAM arrangements, and replace the ASA. Additional discussion of the SAM is contained in Appendix D.

The effect of new entrants

Liberalisation of air services across the Tasman included removing restrictions on entry for New Zealand and Australian owned airlines. Three new entrants emerged in 1994 and 1995: Kiwi Travel International Airlines; Air New Zealand subsidiary Freedom Air International; and Ansett International. However, by early 1997 only Freedom Air International operated services in its own right (Box 4.1). Kiwi went into liquidation in September 1996 and Ansett International entered a codesharing deal with Air New Zealand and does not operate flights independently.

The entry of new competitors did for a time produce substantial consumer benefits in terms of new services and lower fares. There appear to have been some longer term benefits despite Kiwi's failure.

The entry of Kiwi International and Freedom Air was associated with significant traffic expansion at the lower price end of the market. Many first time travellers were attracted by the availability of some highly discounted fares, particularly for passengers travelling to Australia from New Zealand. Total origin–destination traffic between Australia and New Zealand increased from around 1.8 million in 1995 to around 2.2 million in 1996. This increase of approximately 20 per cent compares to an average annual growth rate of less than 4 per cent between 1993 to 1995 (Figure 4.1).⁸

After Kiwi's withdrawal in September 1996, growth slowed markedly and traffic levelled to around 185 000 passengers per month in 1997 and early 1998. This may be explained partly by the fact that fares offered by the scheduled carriers returned more or less to their pre-Kiwi levels, and Freedom also raised

⁸ The growth in traffic in 1995 largely reflects an increase in visitors to Australia, which grew (24 per cent) at more than double the rate of Australian resident departures for New Zealand (11 per cent).

its prices. For example, in response to Kiwi's entry, Air New Zealand and Qantas set their special fares for the Auckland–Sydney route at NZ\$399. After Kiwi's departure these fares rose to NZ\$529 in November 1997. Standard fares on the same route responded similarly. These were NZ\$749 in the high season before dropping to NZ\$499 during Kiwi's presence in the market. After Kiwi this fare rose to between NZ\$729 and NZ\$829 in November 1997 (Haugh and Hazledine 1998).

Box 4.1 New entrants on the trans-Tasman route

Kiwi Travel International Airlines entered the trans-Tasman market in December 1994. It initially operated as a travel agency and air charter firm offering direct non-stop services from provincial New Zealand cities to major Australian cities. In August 1995, Kiwi commenced a scheduled weekly service between Dunedin and Brisbane. It grew rapidly by offering fares which were substantially lower than the prevailing Qantas and Air New Zealand fares.

Kiwi's market share (uplift–discharge traffic) tripled from approximately 1 per cent in 1995 to 3 per cent in 1996 (DTRD 1998). At its peak, during mid-1996, Kiwi operated 30 trans-Tasman services a week. In a second stage of development, Kiwi tried to take on the majors directly by starting up services to Australia from Christchurch and Auckland. Qantas and Air New Zealand responded by matching Kiwi's NZ\$399 fare. The intensity of the competition from the incumbent airlines, and a series of problems — including legal wrangles over its leased aircraft, technical difficulties and diminishing passenger loyalty — drove Kiwi into liquidation in September 1996.

Freedom Air International commenced scheduled services in October 1995. A wholly owned subsidiary of Air New Zealand, Freedom Air was created to provide direct competition for Kiwi, using low fares and attractive accommodation deals. With the failure of Kiwi, Freedom Air withdrew from the domestic market in New Zealand to concentrate on trans-Tasman services. In June 1998, Freedom Air operated flights between provincial New Zealand cities (Hamilton, Palmerston North and Dunedin) and Australia (Sydney, Brisbane and Coolangatta).

Ansett International began a twice weekly service between Sydney and Auckland in 1995. However, almost 75 per cent of these seats were block purchased by Aerolineas Argentinas (Thomas 1996, p. 10). In 1997 Ansett announced that it would no longer operate trans-Tasman services in its own right, instead codesharing on services operated by Air New Zealand.

Source: Findlay and Kissling (1997) and DTRD (1998).

The SAM arrangements paved the way for increased flight frequencies and a wider choice of travel options between regional centres in New Zealand and

Sydney, Brisbane and Coolangatta. The total number of scheduled flights across the Tasman operated by Australian and New Zealand carriers increased from 11 404 in 1995 to 13 665 in 1996 (DTRD 1998). In January 1998, Air New Zealand doubled its trans-Tasman flights from Wellington, and increased its flights from Christchurch by 50 per cent and from Auckland by 15 per cent (Air New Zealand 1998).

Figure 4.1 Growth in Australia-New Zealand origin-destination traffic^a



^a Percentage change on corresponding month of the previous year.

Source: DTRD (unpublished).

Haugh and Hazledine concluded that for New Zealand, the overall impact on consumer welfare of Kiwi's entry was clearly positive.

There was an increase in total traffic and consumers were able to gain the advantage of lower fares, greater product variety and for those living outside Auckland, Wellington or Christchurch the opportunity to travel a much shorter distance to the airport in New Zealand especially those living in the Waikato, Bay of Plenty and Otago. Some of these gains, for example more variety, have not been entirely lost despite Kiwi's exit (1998, p. 8).

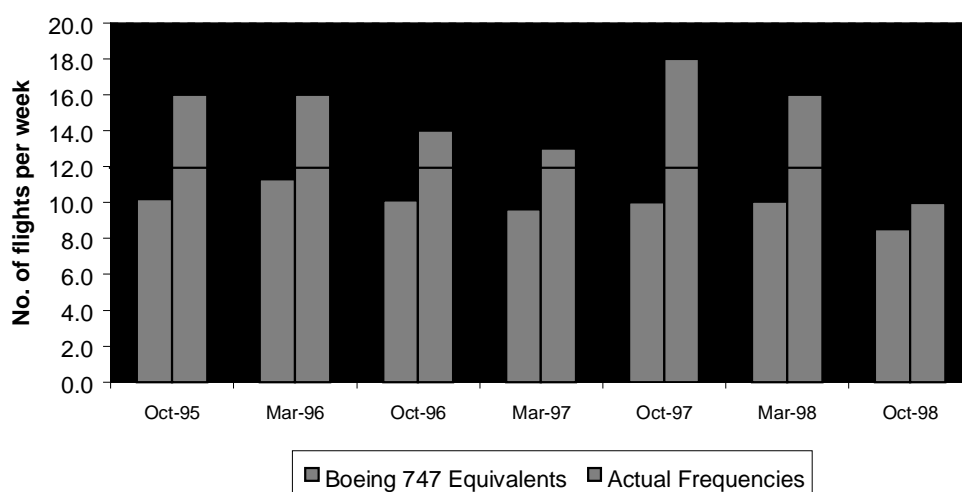
From an Australian perspective, increased inbound tourism benefited the Australian tourism industry and Australian consumers of air services to New Zealand as a result of a wider variety and availability of services and some reduction in air fares.

Beyond rights

While the availability of beyond rights was increased following the 1992 MOU, the cap of 12 Boeing 747 equivalents per week has remained since November

1994. This constraint is a sensitive issue in relations between the two countries. Both Air New Zealand (sub. 6) and the New Zealand Government (sub. 34) have criticised the retention of this limit and advocated further liberalisation. The availability of beyond rights is particularly important for New Zealand carriers. Without them, their ability to compete with sixth freedom traffic carried by Australian carriers between third countries (particularly Asian countries) and New Zealand is limited.

Figure 4.2 Use of beyond rights by New Zealand carriers (six monthly periods, October 1995 – October 1998^a)



a Under the Civil Aviation Act, carriers are required to file tariffs and schedules every March and October for the following period. This figure indicates the use of beyond rights by New Zealand carriers under the Australia-New Zealand ASA for sixth monthly periods ending March or October.

Source: DTRD (unpublished).

It is not clear to what extent this cap has restricted the operations of Australian and New Zealand carriers. Air New Zealand has tended to use more New Zealand rights than Australian airlines have used Australian rights. Air New Zealand has also used its capacity entitlement to operate smaller (than Boeing 747) aircraft, and thus operate more than 12 frequencies a week for much of the time. Even so, at times Air New Zealand has been operating well below the limit (Figure 4.2). This is not to say the limit may not at times have been binding. This could have occurred where the quantum of remaining capacity was not sufficient to allow Air New Zealand sufficient frequencies to commence services to a new destination at a commercial level, for example, to operate daily frequencies.

4.2.5 Recent developments in charter and air freight policy

In June 1996, the Minister for Transport and Regional Development announced changes to Australia's air freight policy for both scheduled and non-scheduled (charter) services (Sharp 1996a). These changes included:

- a proposal to negotiate bilaterally significant increases in dedicated capacity for air freight services in key export markets;
- consideration of the removal of restrictions on third country freight operators;
- the introduction of more liberal international passenger and freight charter guidelines; and
- the development of a model APEC air freight agreement for greater liberalisation of air freight operations.

The negotiation of dedicated freight capacity has created significant opportunities for dedicated freight carriers to operate services on major trading routes. Australia has concluded unrestricted freight agreements with Germany, Luxembourg, Singapore and Taiwan. In addition, 98 weekly Boeing 747 equivalent units of dedicated freight have been negotiated outside those covered by these unrestricted ASAs since March 1996 (DTRD sub. 60).

The international passenger and freight charter guidelines introduced by the Commonwealth Government in June 1996 provide for automatic approval of proposed charter programs of up to three months. They also provided for up to 12 months automatic approval for freight charter programs where the applicant is not currently operating scheduled services to and from Australia and is able to demonstrate the carriage of a high level of Australian exports (DTRD 1996). The policy changes also strengthened consumer protection provisions, covering financial losses from the failure of a charter operator to fulfil its obligations or to complete a program of flights.

The Commonwealth Government has encouraged APEC member economies to agree to remove restrictions on freight carriage within the APEC region. Whilst it appears that little progress has been made in this regard, DTRD (sub. 33) indicated that it has achieved agreement at officials level to remove restrictions on air freight progressively.

4.2.6 Privatisation of Australian airports

The Commonwealth Government announced in 1996 that it intended to tender the leasehold sale of a number of government-owned airports, with the exception of Sydney's Kingsford Smith airport. The policy was aimed at

improving the efficiency of airport operations and facilitating future airport developments on a commercial basis.

The first phase of the process involved the privatisation of the Melbourne, Perth and Brisbane airports. The Government awarded 50 year leases on 1 July 1997 to the successful new operators, Australia Pacific Airports Corporation (Melbourne), Brisbane Airport Corporation (Brisbane) and the Airstralia Development Group (Perth), with an option of a further 49 years. Another 14 airports were leased in the second phase of the airport privatisation process. Sydney's Kingsford Smith Airport remains in government ownership, being operated by the Sydney Airports Corporation.

The operation of airports by private sector interests is likely to increase pressure for further liberalisation of international air services. The new operator of Perth Airport, Westralia Airports Corporation, argued that:

Privatised airport operators, including Westralia Airports Corporation, are actively investigating ways of increasing throughput and diversifying and expanding airport activities. ... [However] existing air service agreements are constraining new service opportunities to and from Perth International Airport. For consumers, these constraints are affecting frequency of flights, opportunities for lower pricing alternatives and alternative service options (sub. 15, pp. 1–2).

Issues related to the operation of airports and the importance of access to airport infrastructure are discussed in Chapter 8.

5 AUSTRALIA'S INTERNATIONAL AVIATION POLICY

Australia's international aviation policy has changed dramatically over the past decade as detailed in Chapter 4. The policy emphasis has changed from protecting the Australian airline industry to promoting the economy wide benefits of international air services. The Commonwealth Government has sought to encourage a more outward looking, robust and internationally competitive aviation industry.

Australia's approach to negotiating international air services entitlements has changed in line with this broader policy agenda. This chapter examines the Government's current policy objectives, evaluates the success of recent policy changes, and outlines the extent to which the Commonwealth Government's negotiating framework can be improved. It therefore addresses the legislative review requirement under the Competition Principles Agreement to clarify the objectives of the international aviation policy.

5.1 Policy objectives

Australia's international air services policy for many years was conducted largely according to the maxim that what was good for Qantas was good for the country. In turn, Qantas' pursuit of commercial objectives was conditioned by what it perceived, or was encouraged to perceive, were national objectives.

The Minister for Transport and Communications acknowledged in 1989 that emphasis had traditionally been placed on negotiating entitlements in favour of Qantas:

Historically, the interests of Qantas were the predominant factor when the Government was considering entering into new air service agreements with foreign Governments or amending existing ones. ... the emphasis was on trading 'like for like' benefits. ... Indeed access has sometimes been refused to a foreign carrier where our own did not have an interest in flying to its country (Willis 1989, p. 1).

The Minister signalled a change in the Commonwealth Government's policy towards:

... a more hard-headed economic approach to air services, and fuller analysis of where to capture the economic and other benefits for Australia. ... what is in it for Australia as a whole will be the dominant consideration (Willis 1989, p. 3).

These changes removed many of the operational constraints on Qantas and allowed it to operate in a more commercial manner. The Department of Transport and Regional Development (DTRD) commented that:

Qantas was freed from having any real or apparent obligation to maintain market share on behalf of the national interest, and its Chairman has informed shareholders publicly that it no longer feels such an obligation (sub. 33, p. 13).

Similarly, the Tourism Task Force highlighted the growing acceptance of the commercial independence of Australian airlines:

While some participants in the tourism industry were highly critical of the Qantas and Ansett decisions to cease services to South Korea, the TTF recognises that Australian airlines are in business rather than in Government and cannot afford to operate unprofitable routes (sub. 38, p. 2).

With major changes to airlines, airports and multiple designation,¹ it is appropriate to evaluate the success of the Commonwealth Government's current approach to negotiating air services arrangements (ASAs). In reviewing legislation that restricts competition, the Competition Principles Agreement requires that the objectives of legislation be clarified. In accordance with this requirement, the Commission has identified that Australia's negotiating approach now aims to:

- take an economy wide approach and consider a wider range of interests in the development of negotiating stances;
- end special treatment of the Australian airlines and provide the airlines with greater commercial freedom;
- encourage new services by Australian and foreign airlines, including charter and freight services, to a wider range of Australian and foreign destinations;
- respond to market demand more quickly; and
- aim for a balance of overall benefits from negotiations with other countries, rather than strict bilateral reciprocity.

Success in achieving such objectives is difficult to measure. The growth in Australian international air traffic over the last ten years is outlined in Chapter 2. The system is less constrained now than it was before this process began, and there is general consensus that there have been significant gains as a result. But it is difficult to determine whether greater gains may have been possible. Many

¹ There are still some outstanding matters: Sydney Airport is still to be privatised; beyond rights are still restricted under the Australia–New Zealand ASA; and the two countries have not proceeded with implementing a joint multiple designation regime for Australasian carriers in international markets, as envisaged in 1992 (Keating 1992).

inquiry participants argued that greater progress could have been achieved, and they are eager to ensure that it is accelerated in the future.

Some major policy objectives of the Commonwealth Government's international aviation policy are evaluated in the following sections.

5.2 Economy wide approach

Encompassing a wider range of interests in bilateral negotiations means giving sufficient consideration to passengers and users of air freight, the tourism industry, State and local governments and other regional interests, in addition to the aviation industry itself. DTRD submitted that Australia's approach to negotiating ASAs has changed:

No longer were the interests of the then single Australian international airline, Qantas, to be the prime factor in determining Australia's negotiating strategies. A wider range of interests were to be taken into account, in particular those of Australia's tourism and other export industries. Over time, this has led to Australia's considered negotiating position at each set of bilateral talks being formed after taking into account a balance of interests (sub. 33, p. 11).

Although the stated objectives of Australia's international aviation policy are much broader than they were a decade ago, some participants argued that the negotiation of Australia's ASAs does not reflect this change fully and that Australian international aviation policy still predominantly aims to ensure the viability of the Australian airline industry. Aerolineas Argentinas commented that:

... the interests of the transport bureaucrats and the Australian airlines continue to take precedence over other equally important elements of the national interest. ... [and are] holding back progress towards a truly competitive and market-oriented situation in airline access to Australia (transcript, p. 366).

DIST suggested that:

... the relative balance given to Australian airline and tourism/trade interests in the formulation of negotiating strategies is not yet considered optimum for maximising net national benefit (sub. 31, p. 29).

DTRD (sub. 60) strongly disagreed and argued that these comments reflected the views of aggrieved parties rather than any undue influence given to airline interests.

It was apparent to the Commission that Australia's aviation policy has changed considerably to encompass interests other than those of the airlines. However, there are strong perceptions among a number of participants that this process is still not complete. Given the interest in these issues and the importance of

adopting an aviation policy which is in the national interest, consideration of the wider range of interests in bilateral negotiations may be strengthened by:

- clarifying aviation policy objectives in a policy statement;
- establishing more effective consultation mechanisms with interested parties;
- having greater transparency and public access to air services arrangements; and
- broadening departmental input into air services negotiations.

5.2.1 Need for a clear policy statement

There is no clear statement of Australia's aviation policy objectives, including the Government's approach to regulating and negotiating international air services entitlements.

The Centre for Asia Pacific Aviation argued that there is a distinction between having an aviation policy and having regulation:

... regulation is no substitute for aviation policy. We have in this country a range of in some ways almost perfect regulators; perfect in terms of their being clearly legislated with very specific and sometimes wide-ranging policy goals, many of which conflict, but none of which work directly towards the establishment of a sound aviation policy per se (transcript, p. 196).

Throughout this inquiry, the Commission referred to a number of Ministerial speeches, statements, pieces of legislation and associated second reading speeches and explanatory memoranda, individual policy guidelines and departmental reports to infer current policy objectives. Indeed, DTRD indicated that it relied on a variety of such documents:

... we do have an aviation policy ... the Minister for Transport and Regional Development has made policy statements in the past on every occasion when the government has undertaken a major reform option. There's a pile of books which ... actually outline these and the rationales for them. In more recent times John Sharp, the former minister, made a keynote speech to the aviation industry — [at the] aviation press club — indicating the nature of what he considered Australia's aviation policy and what it was directed towards (transcript, p. 311).

However, reliance on such a wide range of sources is not practical for most people with an interest in the air transport industry. Access to some relevant documents is not easy for those outside government circles. The policy documents are difficult to piece together; many of these documents deal with discrete areas only (such as the criteria guiding IASC determinations of capacity or guidelines for the approval of charters) but provide little guidance on the overall thrust of aviation and transport policy.

Even with an examination of the full range of policy documents, the objectives of the current international air services policy are not clear. It is often difficult for an observer to determine which elements of an old policy are retained when government policy changes. And as the South Australian Government pointed out, this can make it difficult to assess the extent to which the policy is being achieved and has consequences for other agencies and businesses:

... Australia's aviation policy objectives are widely scattered throughout a range of documents. ... successive Commonwealth aviation policy statements have, without exception, included references to the benefit of spreading international air access to regional Australia, but without providing detailed policy as to how that will be accomplished. This sort of policy vagueness has made it possible for various Commonwealth agencies or business enterprises to implement policies of their own which act at total odds with the objective of achieving better international access to secondary ports (sub. 63, pp. 2–3).

Several other countries explain their approaches to international air services through an overarching policy statement. The United States has published an aviation policy statement which was developed by the US Department of Transportation in consultation with the Department of State and other executive agencies (DOT 1995). It sets forth objectives and guidelines for use by US Government officials in carrying out US international air transport policy, and establishes a strategy for achieving those objectives (Box 5.1).

Similarly, the *International Air Transport Policy of New Zealand* states that:

The overall and determining objective of New Zealand's international air transport policy is to maximise economic benefits to New Zealand, including trade and tourism, consistent with foreign policy and strategic considerations. New Zealand therefore seeks to conclude with other countries the most liberal and flexible air services arrangements possible, as a means of securing enhanced quantity, quality and breadth in our international civil aviation links (Williamson 1998, p. 4).

Box 5.1 US International Air Transportation Policy

The *Statement of United States International Air Transportation Policy* (DOT 1995) indicates that the major US air transportation objectives are to:

- increase the variety of price and service options available to consumers;
- enhance access of US cities to the international transportation system;
- provide carriers with unrestricted opportunities to develop types of service and systems based on their own assessment of market demand;
- recognise the importance of military and civil airlift resources for defence mobilisation and deployment requirements of US defence and foreign policies;
- ensure fair competition and a level playing field by eliminating marketplace distortions such as government subsidies, restrictions on carriers' ability to conduct

their own operations and ground handling, and unequal access to infrastructure, facilities and marketing channels; and

- encourage the development of the most cost-effective and productive air transport industry to be best equipped to compete in the global aviation market.

The Statement outlines three main strategies for achieving these objectives.

1. Offer liberal agreements to a country or group of countries if it can be justified economically or strategically. View economic value more broadly than in the past, in terms of both direct and indirect access and future development potential. Adopt liberal agreements with smaller countries where it puts competitive pressure on neighbouring countries to follow.
2. Work with countries that control access to their markets tightly to develop alternatives which address their immediate concerns and also advance US international aviation policy objectives. Examine alternative approaches including departure from established methods of negotiation (such as negotiations with two or more trading partners); development of service opportunities for foreign airlines to service the United States more economically; and assist other governments and their constituencies to appreciate the benefits of unrestricted air services. In the interim, consider transitional or sectoral agreements.
3. For countries not willing to advance liberalisation, maintain maximum leverage to achieve procompetitive objectives. One option is to limit foreign airlines' access to the US market and restrict their commercial relations with US airlines. When airlines request authority to serve restricted bilateral markets not provided for under an international agreement, consider their request on a case-by-case basis in light of all US policy objectives.

The Commission believes that a concise statement articulating the Commonwealth Government's international aviation policy would reduce uncertainty, promote a greater understanding of the Government's objectives and enable evaluation of the extent to which those objectives are being achieved. A policy statement on international air transport should:

- state the Government's policy objectives and strategies for international air services and their relationship to other government policy;
- wherever possible, establish objectives or performance indicators which are measurable so as to facilitate evaluation;
- indicate the role of government departments and agencies in meeting these objectives; and
- detail the Government's procedures for consultation with interested parties.

Many participants supported the need for an aviation policy statement including Westralia Airports (sub. 59), the Australian and International Pilots' Association (sub. 61), the South Australian Government (sub. 63) and Australia World Airways (sub. 69). Qantas argued that 'policy consistency and its articulation are important elements in the development of an efficient and competitive airline industry' (sub. 67, p. 10) .

Recommendation 5.1

The Commonwealth Government should publish, and keep up to date, a statement of its aviation policy.

5.2.2 Consultation and transparency

Arrangements for consulting with interested parties outside the airline industry also contribute to the doubts of various participants about DTRD's implementation of an economy wide approach. Two main issues have been raised, namely to what extent do existing consultation mechanisms take into account the broader interests in international air services and also, to what extent is there sufficient feedback and communication from DTRD about the outcome of Australia's negotiations?

DTRD is primarily responsible for developing a proposed negotiating position in advance of bilateral negotiations. It has indicated that its negotiating position is developed after consultation with interested parties including:

- Department of Foreign Affairs and Trade (DFAT) and Department of Industry, Science and Tourism (DIST);
- Commonwealth and State tourism and transport organisations;
- Australian international airlines;
- airport operators;
- freight interests;
- customs and immigration authorities; and
- aviation security, air service and safety authorities.

There are a number of consultation groups, such as the Tourism Aviation Group (TAG) and the Aviation Working Group of the Standing Committee on Transport (AWSCOT), which provide comments to DTRD in developing Australia's negotiating position.

The TAG facilitates consultation with the tourism industry and other private sector organisations and makes recommendations to DIST for submission to DTRD. The Office of National Tourism of DIST chairs and administers the group. TAG membership includes the Australian Tourism Commission, State representatives, and peak industry representatives and, more recently, the privatised airport operators.

A number of the newly privatised airport operators have expressed an interest in becoming more directly involved in the consultation process, rather than having their interests subsumed under the TAG process. DTRD is currently considering a number of options which would enable airport operators to contribute to various negotiations.

A number of participants argued that the TAG is too narrowly focused and does not provide adequate representation of the range of interests related to air services. The Western Australian Government said:

... we see it from the state's point of view as not just a tourism issue but a freight issue as well, and in the interest of people who now own substantial ground content (transcript, p. 281).

It added:

Other interested parties, such as the privatised airports, the air freight industry and the business community, which have a substantial interest in international air services have no avenue of input into the bilateral process. ... While it may be unwieldy to have all such groups directly involved in the negotiation process, ways need to be found to enable the private airports, the air freight industry and the business sector to have a greater input into the process (sub. 30, p. 4).

AWSCOT provides a forum for Commonwealth–State consideration of issues related to aviation policy, including Australia's international air services negotiations. It comprises representatives from DTRD (although not directly from the International Relations Branch which handles international air services negotiations) and from State and Territory departments of transport.

State-based working groups have been established to examine issues in the aviation sector. In Western Australia, the Strategic Aviation Committee coordinates input from various interested parties in relation to aviation policy and DTRD's air services negotiations. This feeds into the Aviation Policy Committee which is chaired by the Premier. The Western Australian Air Freight Export Council also provides a forum for considering impediments to air freight exports in Western Australia, including those arising from international air services arrangements. These and similar arrangements in most other States mean that State submissions to DTRD can reflect a consolidated position from those with major interests.

The Victorian Government commented that AWSCOT and TAG, in their current forms, provide limited fora on aviation and do not facilitate two-way information flows. It criticised the fact that formal DIST submissions to DTRD, to which it contributed, were not available to TAG members:

For the vast majority of ASA negotiations, State representatives to TAG receive notification and are invited to provide submissions for a 'consolidated' DIST submission to DTRD and are usually provided with a DTRD summary review of the market involved. DIST's submissions are not available to TAG members. DIST representatives accompany ASA negotiators, but detailed negotiated outcomes are better explained by DTRD. Against this background, the Victorian Government has chosen to send its ASA submissions directly to DTRD on a confidential basis. It is understood that Queensland and South Australia do the same (sub. 27, p. 6).

Westralia Airports Corporation recommended that:

... the government review the existing consultation process to ensure that it is transparent and that the priorities of the states, airlines, airport operators, exporters and other industry stakeholders are given appropriate balanced consideration (transcript, p. 354).

Melbourne Airport argued that segmenting the consultation process by operating a number of separate, and sometimes overlapping, consultation groups is both counterproductive and inefficient:

... there must be a better consultative process than what there is currently with this segmentation so that we can be able to organise one group that meets on a regular basis, where you can be able to go off and voice your opinions and you can be able to say where we go (transcript, p. 447).

These various groups in their current form do not appear to provide adequate fora for considering the broad range of interests and issues relevant to Australia's negotiating stance on air services. A direct consultation process, chaired by DTRD, which targets as many interest groups and issues as possible, not just tourism, would help to ensure that an economy wide approach is taken in negotiating ASAs. This would also minimise the duplication and overlap that currently exists between the separate consultative groups.

A number of participants argued that they are consulted before some negotiations, but do not always receive adequate feedback about the outcome of negotiations. The Western Australian Government argued that:

We have the opportunity to provide submissions to the Federal Government ... but we've received very little feedback of what actually takes place in the bilateral process, and this is a situation that is unsatisfactory to us (transcript, p. 275).

It highlighted some issues on which it wished to receive feedback:

Was the country they were talking to receptive to increasing capacity? ... if we put information forward we [need to] know it's taken to the negotiating table. If it's not taken to the negotiating table, why not? And then to at least come back and say, 'This is what happened'. So then, when we need to respond to the Premier and other ministers, we're in a position to do so (transcript, p. 283).

Further, Westralia Airports Corporation stated that:

Prompt and direct feedback on the outcomes of negotiation is also critical to ensure that stakeholders' interests are in fact being looked after (transcript, p. 354).

DTRD acknowledged that it has recently become aware of some concerns about the feedback, and is addressing the situation (transcript, p. 340).

It is generally acknowledged that intergovernmental negotiations cannot be conducted effectively in the full glare of publicity, but more information could be made available to interested groups and the community more generally. Greater openness would do much to overcome perceptions that DTRD has not fully embraced an economy wide approach in negotiating ASAs, and to improve the transparency of the negotiation process.

Improved direct consultation with interested parties will give them more confidence that their views have been taken into account. The TAG may provide an effective consultation and feedback mechanism for dealing with tourism interests and issues, but there needs to be a mechanism which has regard for issues other than tourism, including those of relevance to freight users, airport operators and State governments. The provision of timely and informative feedback on outcomes is also central to promoting the openness and transparency of the process.

Recommendation 5.2

DTRD should develop a formal direct consultation process which encompasses *all* major interested parties to obtain their views on ASAs being negotiated and ensure that it provides timely and informative feedback on the outcomes of the ASA negotiation process.

5.2.3 Government handling of negotiations

Another means of better ensuring that the economy wide interests in negotiating Australia's ASAs are taken into account could be to switch the responsibility for international aviation policy and negotiations from DTRD to DFAT, or for central agencies to have greater involvement in approving the negotiating framework.

DTRD is primarily responsible for developing Australia's negotiating strategy and leading the negotiating team at Australia's bilateral talks. This differs from the practice with many other areas of Australian trade which are negotiated primarily by DFAT. However, as DTRD (sub. 60) indicated, there are some exceptions such as the Department of Primary Industries and Energy which leads trade talks in relation to fisheries.

The sectoral approach to trade in international air services, separate from most other traded goods and services, is generally justified by the technical complexity of ASA negotiations and the need for specialist knowledge. However, a sectoral approach may allow specific airline industry interests to influence trade of air services unduly. It may also result in conflict between trade facilitation and transport objectives (particularly any industry development objectives).

DTRD argued that:

The sectoral nature of air services negotiations is a universal phenomenon. The notion of broadening the field of trade negotiations to include air services, or to trade for comparative advantage across sectors including aviation, has not been embraced anywhere and would be difficult to effectively trade in the extremely valuable third country markets (sub. 60, p. 9).

The focus of negotiations on air services alone restricts Australia's ability to consider tradeoffs between liberalisation of air services and other areas of tradeable goods and services. Broadening the field of trade negotiations to include air services could produce outcomes that are not possible within a narrow industry-specific framework, and hence be more beneficial to the community as a whole.

Increasingly, countries are considering their approach to air services in the context of wider trade agreements. Europe's liberalisation of trade in air services was linked to liberalisation of trade in other goods and services. Similarly, the Australia–New Zealand Closer Economic Relations Trade Agreement for comprehensive liberalisation of trans-Tasman trade in goods and services has prompted the Single Aviation Market arrangements. DTRD acknowledged that:

... the direction of international economic reform in tradeable goods and services is swinging heavily in favour of forums where the totality of trade benefits to a nation from reform, rather than sectoral benefits, can be taken into account (sub. 33, p. 34).

Worldwide moves towards comprehensive trade agreements mean that Australia's approach to air services will need to be examined in the context of other traded goods and services. The application of the General Agreement on

Trade in Services to air transport services is to be reviewed in the year 2000. To the extent that the review makes significant progress, Australia will need to focus on its approach to trade in air services within a general trade framework.

As noted earlier, one way of ensuring that aviation policy is formulated within a broader trade agenda would be to transfer responsibility for the negotiation of Australia's ASAs to DFAT. However, at the moment, DFAT does not possess the specialist expertise required to take the lead role in negotiating ASAs.

The DFAT representative on Australian negotiations is generally a staff member from the relevant country desk or port, rather than a Canberra-based specialist in international aviation. As a result, if responsibilities for international aviation were to be transferred to DFAT, it would require administrative and staffing changes.

Another approach may be to increase the involvement of central agencies such as the Departments of Prime Minister and Cabinet, Treasury and Foreign Affairs and Trade. This would promote a whole of government approach to air services and ensure that a wide range of factors and interests are taken into account when developing a negotiation strategy. This approach has been adopted in New Zealand through the operation of the External Aviation Policy Committee (Box 5.2).

Box 5.2 New Zealand External Aviation Policy Committee

New Zealand's international aviation policy is developed and implemented by the External Aviation Policy Committee. The External Aviation Policy Committee is chaired by the Ministry of Transport and includes representatives of the Ministry of Foreign Affairs and Trade, the Ministry of Commerce, the Treasury and the Department of Prime Minister and Cabinet. It is responsible for considering all proposals to enter into negotiations on air services and seeking Government endorsement of these proposals. Input is also sought from the New Zealand Tourism Board and New Zealand international airlines.

In recent years, the External Aviation Policy Committee has produced Strategic Action Plans for implementing aviation policy, outlined the priorities for negotiation and specific issues to be addressed in each bilateral relationship. This has involved seeking the input of other industry groups such as Tradenz, the Manufacturers' Federation, and the Inbound Tour Operators' Council of New Zealand. These plans are confidential.

Source: New Zealand External Aviation Policy Committee (sub. 34).

Such an approach encapsulates a number of important principles. First, it enables consideration of proposals on air services negotiations from a whole of government perspective. Second, it incorporates a strategic and documented

approach to air services which could facilitate a thorough evaluation of the negotiating approach and outcome. Melbourne Airport argued that it would like to see some sort of performance indicators incorporated into the process in order to:

... measure the performance of the various government organisations that are in the negotiating framework [and to] see where they have succeeded or not succeeded. At the moment all we do is we receive back information saying we were successful or unsuccessful (transcript, p. 437).

Third, it provides the basis for more effective consultation and a transparent process.

A more robust and transparent consultation process, as recommended above, should overcome some of the perceptions about the extent to which economy wide interests are effectively taken into account when negotiating Australia's ASAs. The Commission considers that the current arrangements could be improved further through greater involvement of central agencies in approving the final negotiating position. An interdepartmental committee chaired by DTRD, with representatives from these central agencies and DIST would appear to be most appropriate.

Recommendation 5.3

An interdepartmental committee, chaired by DTRD, should be established to consider and endorse all proposals relating to Australia's air services negotiating position. The committee should include the Departments of Prime Minister and Cabinet, Treasury, Foreign Affairs and Trade, and Industry Science and Tourism.

5.2.4 Public access to air services arrangements

Public availability of the full details of Australia's ASAs is currently restricted. The Air Services Agreements are publicly available by virtue of their treaty status, but certain governments have requested that Memoranda of Understanding be treated as confidential. Such governments include those of Austria, China, the Cook Islands, Hong Kong, Taiwan, Macau, Nauru and Singapore.

DTRD indicated that confidentiality of certain parts of Australia's ASAs is usually granted at the request of Australia's bilateral partners, rather than being required by the Australian Government. DTRD explained that the main reason for confidentiality requests is that countries do not wish other bilateral partners

to know the nature of their arrangements with Australia. They are particularly concerned that the public availability of commercially sensitive arrangements may prejudice future negotiations with other bilateral partners.

DTRD usually provides access to interested parties to the full set of Australia's ASAs only after they have signed an undertaking to protect the information they contain. DTRD also produces publicly available summaries of arrangements for more general use, and provides copies of specific arrangements on request where they are not explicitly confidential.

The availability issue differs in the United States. The Senate must ratify US ASAs in their entirety, so all arrangements are made publicly available.

DTRD argued that:

... we don't have any particular reason to have [the ASAs] confidential, but there are some parties we negotiate with who have strong views about it. The United States is probably in a position to tell those parties that they have a public policy. We are much less in that position to tell those bilateral partners (transcript, p. 397).

A number of participants argued that the confidential nature of the ASAs reduces transparency and understanding of bilateral issues. The Victorian Government argued:

Current DTRD policy is to restrict access to ASAs and relevant documents, thus creating a situation where all parties are reliant on DTRD advice. Australia's carriers also hold copies of agreements. As a matter of principle, the Victorian Government believes that states and territories should have right of access to ASAs and relevant documentation. Streamlined access would also greatly improve understanding of bilateral issues, improve the quality of, and quicken advice to DTRD (sub. 27, p. 7).

Brisbane Airport Corporation also stated that there should be greater access to ASAs:

Currently the agreements are only made public in an abridged format. Full details of the agreements, including some background to the decision making, should be made available to all concerned parties. As the agreements form the basis of the most fundamental business of the airport, the airports should have greater access to the decision making and the subsequent results (sub. 10, p. 5).

The Victorian Government (sub. 27) indicated that ASAs can be obtained from various sources, thus making the current Commonwealth policy and confidentiality restrictions a hindrance rather than a barrier.

DTRD argued that agreeing to confidentiality can sometimes enable Australia to obtain a more liberal outcome, and it is not willing to sacrifice a liberal outcome on the altar of making things more transparent (transcript, p. 398).

The Commission is unable to assess the extent to which agreeing to confidentiality has produced benefits for Australia as it is difficult to know what outcome might have been possible if arrangements had been completely transparent. Stiglitz (1998), drawing on his experience as a member and then Chairman of the US Council of Economic Advisors in the US Clinton administration, argued:

... hiding information may sometimes provide a tactical advantage in the political bargaining game. But ... all too often, secrecy is neither justified by national security interests, nor as a prerequisite for rational or thoughtful debate, nor even as a tactical necessity in a broader strategy, but rather, secrecy serves as a cloak behind which special interests can most effectively advance their interests, outside public scrutiny (pp. 15–16).

The Commission firmly believes that there should be a strong presumption in favour of disclosure and transparency of the arrangements. Confidentiality should be limited strictly to those parts of the arrangements specifically required by other governments and the reasons for granting confidentiality should be scrutinised closely. All other arrangements should be made public and easily accessible.

The Commission's recommendations to strengthen public consultation processes in relation to developing Australia's negotiating position should provide a mechanism for ensuring that the benefits and costs of a less transparent system are properly assessed. Greater involvement in the negotiation process by central agencies should also promote a more rigorous assessment of, among other things, whether confidentiality should be granted to air services arrangements with other countries.

Recommendation 5.4

Confidentiality of ASAs should be limited strictly to those parts of the arrangements specifically required by other governments. The reasons for granting confidentiality of ASAs should be scrutinised closely. All other arrangements should be made public and easily accessible.

5.3 Responding to market demand

The responsiveness of the bilateral system to market demand relies on two factors, namely the ability to anticipate growth in passenger demand and to respond quickly to changes in the market. One of the major objectives of Australia's international aviation policy since 1992 has been a commitment by

the Government to expand market access opportunities by negotiating capacity ‘ahead of demand’.

5.3.1 Negotiating capacity ahead of demand

Bilateral negotiations between June 1992 and June 1996 doubled the passenger capacity available to Australian carriers under ASAs. DTRD (sub. 33) indicated that capacity for international passenger services to and from Australia since March 1996 has increased by the equivalent of an additional 234 Boeing 747 scheduled passenger services per week (excluding the recent outcomes of negotiations with Thailand and Argentina). The data exclude New Zealand and the United States which do not impose capacity limits on Australia’s third and fourth freedom traffic.

This has led to a substantial bank of capacity available for Australian and foreign carriers compared with the amount of actual passenger traffic (Figure 5.1). This capacity bank is an aggregate and does not indicate the amount of capacity used by Australian and foreign carriers on specific routes. Furthermore, it does not take account of load factors — planes are rarely completely full. The lower line in Figure 5.1 indicates the number of passengers actually flown (filled seats) as distinct from the actual capacity operated by carriers (comprising both filled and unfilled seats). The actual capacity used by carriers lies somewhere between the two lines in Figure 5.1.

Figure 5.1 Traffic carried by Australian and foreign carriers compared with negotiated entitlements, 1980–81 to 1996–97 (millions)



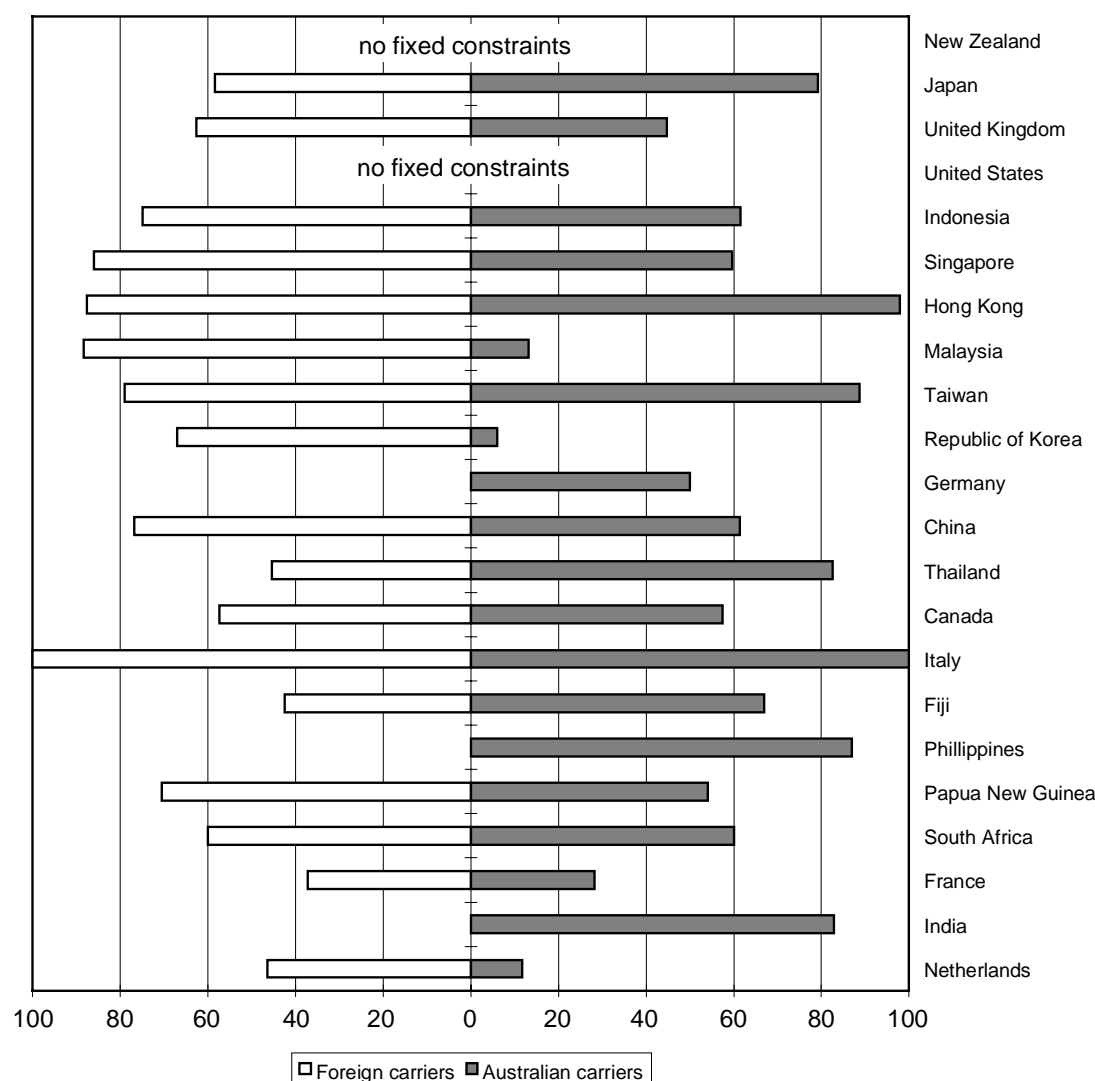
Note: Negotiated seat entitlements do not include freight entitlements, except where there is a substitution formula in the ASAs for converting freight capacity to passenger capacity. Passenger traffic is less than the use of capacity which includes empty seats flown as well as those carrying passengers. New Zealand and the United States are not included in the data as they do not have fixed capacity constraints.

Source: DTRD (sub. 33, attach. 4).

The extent to which capacity entitlements are used by carriers varies from country to country is shown in Figure 5.2. Capacity remains constrained on a number of routes. As at 30 June 1998, Australian carriers had no remaining flight capacity to Italy² and little capacity left to Hong Kong, India, the Philippines and Taiwan. Further, there was no additional capacity remaining for foreign carriers from Italy and little available for airlines from Malaysia, Hong Kong and Singapore. Carriers from Austria and Dubai, although not in the top 22 countries by origin-destination traffic, also had no remaining capacity to operate additional services to Australia (Appendix E).

² Australia is currently holding negotiations with Italy.

Figure 5.2 Australian and foreign capacity use as a proportion of available capacity, top 22 economies as at 30 June 1998



Notes: The information presented in this table is of a summary nature only. More detailed information about the nature of capacity arrangements is included in Appendix E. The order that countries appear in the table is based on the top 22 economies by origin–destination traffic for the year ending April 1998. The United States and New Zealand are included to show their positions in the top 22 economies, even though they have no predetermined capacity constraints. Where different capacity entitlements exist for different routes to and from an economy, the aggregate capacity entitlements and capacities used have been applied. Where ASAs restrict frequency instead of capacity, data reflect the proportion of frequencies used to those available. Data include capacity available and used for scheduled passenger services but not capacity available for dedicated freight services. Where the capacity used by carriers differs for inbound and outbound traffic, the greater number has been used. Codeshare capacity (including third country codeshare capacity) has been included.

Source: Appendix E, Table E.1.

The data do not indicate the extent to which the flights operated by carriers with existing capacity entitlements are full (with high load factors), but rather the

scope for existing and prospective carriers to make additional flights. Qantas (sub. 25) indicated that current load factors on many of the routes were not excessive. As a result, there is scope for carriers to carry more passengers on their existing flights.

Capacity utilisation rates as at 30 June 1998 may provide a misleading guide of the longer term capacity constraints. Traffic between Australia and a number of other countries was below normal volumes due to the Asian crisis. Hence, the potential for Australia's ASAs to constrain traffic with Asian countries may be understated. Instead, traffic as at 1 February 1998 (just prior to the main impact of the Asian crisis) may give a better indication of the long term trend in traffic volumes relative to capacity.

For three countries, Japan, Indonesia and the Republic of Korea, there was a significant decline in the percentage of capacity used between February and June 1998, not because of increased capacity but because of reduced traffic. Capacity utilisation rates as at 1 February 1998 for Australian carriers were 97 per cent for Japan and 82 per cent for Indonesia. By 30 June 1998, these rates had dropped to 79 per cent for Japan and 61 per cent for Indonesia. Similarly, the capacity utilisation rate for Korean carriers was 84 per cent as at 1 February 1998 and had dropped to 67 per cent by 30 June 1998.

Seasonal peaks in demand further exacerbate the problem of restricted capacity. DIST indicated that:

Travel agents currently complain of a lack of seasonal seat availability on a range of routes including in markets such as Italy, Germany and Hong Kong. ... In some countries even where capacity may currently be adequate, the potential for rapid increases in tourism demand will require further substantial increases in capacity ahead of demand (sub. 31, p. 21).

DTRD (sub. 33) indicated that lack of capacity in particular markets can be largely attributed to one of three factors: first, the conservative approach of some of Australia's bilateral partners; second, the existence of other constraints such as restricted access to airport infrastructure and other environmental problems; and third, the existence of relatively small markets for traffic, which have little market growth or growth that is being met by sixth freedom carriers.

Restrictions on the capacity for the carriers of two countries would suggest that competition between the two countries may be limited. However, on some routes, fifth and sixth freedom carriers provide important competitive pressures and have been able to capture significant market shares.

Table 5.1 Shares of passenger traffic held by Australian, bilateral partner and third country airlines, top 22 countries, year ending April 1998

<i>Between Australia and:</i>	<i>Australian market share</i>	<i>Bilateral partner market share</i>	<i>Third country market share</i>
	%	%	%
New Zealand	42.1	47.2	10.7
Japan	53.4	38.3	8.2
United Kingdom	34.6	15.4	50.1
United States	46.5	30.8	22.7
Indonesia	55.2	39.4	5.4
Singapore	38.7	33.7	27.7
Hong Kong	55.0	35.7	9.3
Malaysia	28.2	48.1	23.6
Taiwan	43.1	30.5	26.3
Korea, Republic of	31.9	49.9	18.2
Germany	39.9	0.0	60.1
China	45.6	31.5	22.9
Thailand	34.2	35.4	30.5
Canada	54.6	4.6	40.7
Italy	40.4	25.2	34.4
Fiji	17.2	77.9	4.9
Philippines	38.4	46.9	14.8
Papua New Guinea	42.6	52.7	4.8
South Africa	42.6	27.8	29.7
France	38.5	6.7	54.8
India	49.6	0.0	50.4
Netherlands	33.6	14.9	51.5

Notes: Origin–destination data were used. Passengers on codeshare tickets could not be distinguished from those on flights operated by ticket seller. Market shares may not add up to 100 per cent due to rounding errors. Data include passengers on scheduled and non-scheduled flights.

Source: Commission estimates based on DTRD (unpublished).

Third country carriers operating through their home country can sometimes achieve significant market shares on some long haul routes, particularly where an intermediate stop is necessary for refuelling and where it may be desirable from a passenger or tourism perspective to break the journey. For example, in

the year to April 1998, 50 per cent of the traffic between Australia and the United Kingdom was carried by third country carriers including Singapore Airlines, Malaysia Airlines, Thai International and Cathay Pacific (Table 5.1).

Under Australia's ASAs, Italy and Hong Kong are two of the most capacity constrained markets (Figure 5.2). However, third country carriers operating between Italy and Australia hold a 34 per cent market share suggesting that competition between Australia and Italy is greater than the capacity constraints in the Australia–Italy ASA would suggest.

However, between Australia and Hong Kong, although there is not much spare capacity, third country carriers have a much smaller market share (9 per cent). This may be because intermediate stops are not necessary and passengers prefer direct flights. Other ASAs identified as approaching capacity constraints which do not appear to have large third country carrier market shares include Japan (8 per cent) and the Philippines (15 per cent).

Even where there is significant competition from third country carriers, the capacity constraints highlighted above still limit the ability of airlines to expand their third and fourth freedom operations.

5.3.2 Responsiveness of the policy

A policy of negotiating capacity ahead of demand needs to be responsive to changes in market conditions. DIST expressed concerns over the pace at which some negotiations initiated by bilateral partners have proceeded:

While we acknowledge that this situation is sometimes unavoidable, we have some concerns over the pace at which some negotiations proceed, particularly where foreign carriers have been eager to commence or increase the level of their services. This has, at times, hindered the provision of adequate capacity to meet projected tourism demand (sub. 31, p. 17).

It cited the recent negotiations with Singapore as an example. During 1996, Singapore Airlines had been operating to the limit of its capacity entitlements and indicated an intention to increase services. Agreement to increase capacity under the Australia–Singapore ASA took nine months from the date originally proposed for talks. However, DTRD argued that:

The basic reason for the time taken was the effort being made to remove restrictions, in an environment complicated by separate commercial negotiations between some of the interested airlines. The Department could be brutally efficient and achieve little; or address the complexities professionally (sub. 60, p. 11).

The renegotiation of capacity entitlements under Australian ASAs is costly and administratively complex. The South Australian Government argued that despite

the recent policy changes (including the policy of negotiating capacity ahead of demand):

... the present bilaterally regulated system is unwieldy, expensive to administer and unable to respond quickly to the rapidly changing industry environment (sub. 3, p. 12).

The existence of capacity constraints reduces the ability for both Australian and foreign designated carriers to respond to rising traffic demand or changes in conditions in those markets (Box 5.3). It enables airlines with existing capacity to exercise increased market power and prevents other airlines from responding to increasing demand.

Box 5.3 Case study of dynamic market conditions in the Philippines

Recent events in the Philippines demonstrate how market conditions can change so that restrictions under ASAs which are not currently binding can quickly constrain the operations of airlines. Philippine Airlines halted all flights to Australia in June 1998 due to a financial crisis. At the time, there was sufficient unutilised capacity available to Australian carriers to allow Qantas to respond by immediately almost doubling its capacity to Manila. Qantas' five weekly scheduled Boeing 767-300 services were converted to a daily Boeing 747-SP service.

However, the doubling of capacity operated by Qantas resulted in most of the capacity available to Australian carriers being used. ASAs with many other countries (such as Fiji) would not have allowed a similar increase in capacity in response to changed market circumstances (Figure 5.2).

Other restrictions in the Australia-Philippines ASA also limit the responses to changed market conditions available to Qantas. The ASA includes few beyond points for Australia, preventing Australian carriers flying through the Philippines to locations such as the United States. In addition, the only points available to Australian carriers in the Philippines are Manila, Cebu and Davao. To the extent that Qantas wished to fly to other points it would be constrained. Other constraints on the flexibility of Australian carriers to offer services to the Philippines include restrictions on dedicated freight capacity and own stopover rights.

Source: Qantas (1998).

Restricted capacity also increases the likelihood of applications for capacity being contested. As the procedures for assessing contested applications are more onerous than those for uncontested applications, the lack of sufficient

capacity to satisfy all potential applicants imposes costs to the government and to airlines (Chapter 7).

Negotiating capacity ahead of actual demand is inherently an arbitrary approach. It is based on presumptions about the determinants of demand which may change at relatively short notice, or may not be justified. The entry of new cut-price carriers (for example third country competitors or charter operators who can drive fares down), or changes in social and economic conditions, for example, can bring about large changes in the capacity demanded and quickly use up available capacity. The risk is that the negotiation process takes so long that existing limits become constraining on the carriers of one or both countries.

Further, the policy of negotiating capacity ahead of demand — as distinct from negotiating unrestricted capacity limits — is a time consuming and costly exercise. DTRD held bilateral consultations between January 1992 and September 1997 on 122 occasions. Many involved the negotiation of additional capacity rights and occurred over a number of days. DTRD held 19 bilateral consultations with 15 countries in 1996–97 (DTRD 1997a).

The negotiation of Australia's ASAs is strategically complex. It can involve sequencing and balancing of arrangements and negotiations in different countries. DTRD noted that the bilateral system has grown from involving:

... relatively simple exchanges of rights in relation to point to point services between two countries, to a complex series of interconnected structures between all countries active in international aviation (sub. 33, p. 2).

In some cases, what may be perceived to be a delay or reluctance in negotiations may actually represent the strategic sequencing of negotiations to achieve greater overall benefits for Australia across all ASAs. For example, it may be beneficial to secure fifth freedom rights from country B before seeking agreement to unrestricted fifth freedom rights with country A. By sequencing negotiations in this way, a country can ensure that it secures rights which can be used under a subsequently negotiated liberal policy.

Consequently, the negotiation of additional capacity generally has been slow and incremental. The complex and time-consuming nature of negotiations has contributed to emerging capacity constraints.

Whilst in some cases there are potential benefits available from sequencing negotiations, these benefits need to be balanced carefully against the costs associated with not quickly easing capacity constraints in important markets.

There are alternative mechanisms for ensuring that capacity remains ahead of demand which do not involve complex and lengthy renegotiations. For example, a number of Australia's ASAs already provide for automatic increases of

capacity at set dates. These may be a less costly and potentially more responsive means of increasing capacity. In addition, the Australia–US agreement contains a trigger mechanism to enable capacity to be increased automatically. However, it contains a complex set of conditions and approval processes, which may constrain the ability of carriers of either country to increase capacity unilaterally and supply more than a specified amount of capacity on a route.

In the context of the current policy framework, the Commission endorses DTRD’s current approach of negotiating capacity ahead of demand as a means of seeking to minimise the constraints on Australian and foreign carriers. Capacity should remain well ahead of demand, not just in aggregate, but on all routes. In addition, there is a need to ensure that capacity is negotiated ahead of potential demand, rather than actual demand, to maximise the ability of carriers to respond to unanticipated changes in the market.

Chapter 9 discusses further the importance of removing remaining constraints on capacity as a means of liberalising Australia’s ASAs.

5.4 Balance of benefits

The bilateral system is based on the principle of reciprocity. The Chicago Convention states that ‘international air transport services may be established on the basis of equality of opportunity’ (Preamble to the Chicago Convention, quoted in DTRD, sub. 33, p. 1).

The principle of reciprocity enables Australia to withhold access to the Australian market where bilateral partners are not prepared to grant similar opportunities to Australian carriers. Before the reform process began, Australia’s approach was one of strict reciprocity whereby access to Australian cities for foreign carriers largely depended on Qantas being granted access to similar sized cities overseas (Willis 1989). This imposed significant costs on Australians by restricting access to international services where Australian carriers were not granted similar opportunities. A number of old ASAs are a legacy of this past approach. However, DTRD argued that:

Australia has not taken such a simplistic policy approach for many years. A wide variety of recent and not so recent bilateral outcomes demonstrate this (eg Thailand, Germany, New Zealand, Malaysia, the UK etc). ... Australia, and almost all of its bilateral partners, look to exchange packages of rights rather than ‘one for one’ trading ... (sub. 60, p. 7).

More recent agreements have attempted to achieve a better ‘balance of benefits’. Qantas supported this general approach:

We believe that we're better off as a country to keep pushing to get those conditions which will give a more vigorous aviation industry, both in terms of the opportunity for Australian companies to participate in that but also in terms of the reciprocal opportunities that it opens up as well. ... The reality is that you do need to use leverage in order to open up these opportunities (transcript, p. 128).

Australia has willingly granted increased market access to foreign carriers in some cases in exchange for rights which would promote competition amongst Australian carriers. DTRD indicated that the process of negotiating multiple designation involved making quite substantial concessions to persuade foreign governments to facilitate a second Australian carrier's entry in those markets (transcript, p. 322).

However, DTRD indicated that the degree of Australia's negotiating coin or leverage is limited in some cases:

... the bilateral structure can be very conservative and inflexible in the hands of countries which are not supportive of competition or for other reasons prefer to manage market entry closely. ... Australia, a small and remote origin/destination market does not have the leverage (from aviation or non-aviation sources) in international markets to overcome the conservative stance by some of its major partners (sub. 33, p. 17).

Qantas also acknowledged the difficulty of extracting greater benefits under Australia's ASAs:

... Australia's leverage in the pursuit of these interests is often less than other countries as a result of Australia's geographic positioning and market size. By linking access to the Australian market with access to foreign markets, it enables Australia to maximise the leverage it does have in the pursuit of national interests. By dealing with this on a case by case basis, Australia is able to make judgments about the various trade-offs required (sub. 25, p. 42).

Nevertheless, participants to this inquiry stated that Australian negotiators tend to drive a hard bargain. Australia has safeguarded access to the Australian market as leverage to gain preferential access for Australian carriers to foreign markets, particularly access to city designation and fifth freedom rights. Thus, the current restrictions are seen as important negotiating coin for future negotiations.

DFAT argued that earlier ASAs negotiated on the principle of bilateral reciprocity did not provide for a balance of opportunities:

Rather, they regulate and restrict the performance of participants in a fragmentary collection of bilateral markets. It has been argued that such arrangements provide a reciprocity in outcome, not opportunity, frustrate gains from comparative advantage and are costly to administer (sub. 52, p. 8).

Some participants argued that restrictions under some of Australia's ASAs have been retained despite the considerable benefits that may be achieved otherwise. For example, DIST argued that:

While Australia attempts to secure such rights for our own carriers, through granting greater market access for foreign carriers to Australia, it continues to question and constrain the ability of foreign carriers to carry such traffic to Australia via third countries (sub. 31, p. 18).

It also cited Australia's past reluctance to grant beyond rights to Aerolineas Argentinas as an example of how potential economic benefits from the additional tourism have been foregone.

A number of States and regional trade and tourism bodies expressed concerns that regional parts of Australia and smaller gateways often suffer as a result of Australia's hard bargaining approach. The Western Australian Government illustrated how Australia's reluctance to grant capacity to foreign carriers restricts benefits to the State:

Qantas which doesn't operate services between Perth and Kuala Lumpur, is understood to oppose any additional capacity being granted to Malaysia. Thus a growing market into Malaysia for tourists and freight is being frustrated and likewise Malaysians are restricted to current capacity, which has a negative impact on the State's economy (sub. 30, p. 2).

Restrictions in Australia's ASAs allow Australia to use its leverage to gain preferential access to foreign markets for Australian carriers, but they may also constrain the wider benefits from granting foreign carriers greater access to the Australian market. These benefits are often not obvious, and to the extent they are overlooked there is a cost to Australian consumer, business, regional and State interests.

6 ECONOMIC EFFECTS ON AIRLINES, USERS AND THE ECONOMY

The economic regulations in the bilateral framework of international air services have had profound effects on airlines and their users. While liberalisation over the last decade has lessened these effects significantly, Australia's ASAs still affect where airlines fly, the number and frequency of flights they operate, what aircraft they use, their ownership and access to equity, and how much they can charge. They influence the nature of competition among airlines through controls on market entry, and the quantity and variety of rights allocated to particular airlines.

The regulatory system influences airlines' costs, sometimes facilitating the operation of efficient air services, but mostly increasing the costs of operation by restricting airlines' ability to operate efficient networks. Higher costs and restricted competition mean that prices are higher than they otherwise might be. The regulatory system also has implications for airlines' revenue and profitability.

The effects of the regulatory system are felt by:

- passengers, whose total costs of travel vary with the level of airfares and the range and quality of services offered;
- the Australian tourism industry, whose output varies with the number of overseas visitors travelling to Australia and the extent to which Australians substitute international for domestic tourism;
- users of air freight, whose competitiveness varies with the level of air freight charges and the range and quality of services offered; and
- the economy as a whole.

Each of these groups and sectors can be affected differently, creating a mix of costs and benefits across different sectors of the economy. To the extent that current arrangements result in higher air fares, the output of Australian tourism operators decreases as foreign tourists are discouraged from visiting Australia, and increases as Australian travellers are induced to substitute domestic for foreign travel. The overall effect of the regulations on Australian economic welfare is determined by the balance of gains and losses across all sectors of the economy, as it is for all barriers to international trade.

The key features and restrictions in the air services arrangements (ASAs) which affect the efficiency of airlines are described in Chapter 3. These regulatory

features can have effects individually, but more often they work in combination to constrain airlines' operations and limit competition. A shortage of capacity, for example, may allow designated airlines to charge high prices, but when it is combined with the effects of other constraints such as city designation, the net result could be to limit the variety of services provided and raise the cost of providing those services.

Several of the specific constraints have similar effects on airline behaviour: market entry on a particular route could be constrained by insufficient capacity, restrictions on codesharing, or by not having the appropriate fifth or seventh freedoms.

This chapter examines the economic effects of regulations on the airlines and users, rather than technical regulations governing the conduct, safety and security of international aviation. It does however give consideration to the possible safety implications of economic liberalisation.

6.1 Effects on airline costs

Australia's ASAs affect airlines' costs in many ways. They limit access to equity, and affect how airlines configure their networks. There are also significant compliance costs. In this section, the restrictions are discussed according to which types of costs incurred by airlines — factor costs, operating costs and administrative costs — they affect.

6.1.1 Factor costs

The constraints have implications for employing labour, and there are serious effects on the cost and availability of capital.

Labour

The regulatory structure may affect the cost of labour. If regulations or industry policy provide protection to an industry, the value of protection may be dissipated in poor productivity, and higher-than-normal returns to labour and capital. To the extent that Australia's aviation regulations have limited competition over the years, and to the extent that this protection was not a *quid pro quo* for implementing the Commonwealth Government's non-economic objectives, airlines have enjoyed a privileged position.

Entry limitations and capacity constraints have the potential to allow airlines to earn above normal returns, which may be appropriated by shareholders or paid

out in higher than normal costs (including wages, salaries and working conditions).

ASAs also have some impact on the employment of labour by restricting cabotage rights. By preserving the rights to fly domestic services for Australian owned and controlled airlines, ASAs indirectly maintain an employment base for Australians on Australia's airline services.

The implications for employment of deregulating air services were of concern to a number of participants. The Australian Services Union stated that it:

... is clearly concerned that deregulation will place pressure on labour costs and conditions of employment were it to be pursued as Australian airline workers will in effect be increasingly compared to workers' wages and conditions applying in other economies which are often much lower than those which apply in Australia (sub. 20, p. 3).

It also noted that:

A study of JAL reported that the establishment of Japan Air Charter has provided 30 per cent lower labour costs as 90 per cent of the crew are Thai paid about one tenth the wages of JAL flight attendants (sub. 20, p. 6).

Qantas emphasised the links between the competitiveness of aviation and the prices of labour and capital:

Given the valuable contribution that aviation and tourism make to national welfare, it is essential that the aviation market is globally competitive and functions in the most efficient way. This means that the inputs that the industry depends on, such as labour and capital, must also be available on an internationally competitive basis (sub. 25, p. iii).

To the extent that foreign airlines would take up cabotage rights if they were granted, some domestic employment by Australian airlines could be lost. But if foreign airlines offered extensive domestic services, they would find it necessary to employ additional Australian staff. Further, Australia's international airlines already have some ability to substitute overseas workers for Australian workers. They operate both domestic and international flights and need to draw on labour in most of the countries they serve. These may include local staff required for marketing, sales, aircraft maintenance, cabin crew and pilots.

Capital costs

The relatively capital-intensive nature of the airline industry, combined with the fact that airlines are generally regarded as being inherently risky investments, means that access to large, well-functioning capital markets is an important issue for all airlines. Concerns about the cost-raising effects of the ownership

and control requirements for national designation lie behind the proposal by the ICAO Secretariat to liberalise designation rules (ICAO 1994).

The effects of these restrictions may vary from country to country, but are likely to be greater for countries with small domestic capital markets. Air New Zealand argued that:

The restrictions are more onerous in less populous countries such as New Zealand (and, to a degree, Australia) where there is a relatively small equity market and, in consequence, there are limits to the local capital available for investment in airlines. The effect can restrict the growth of such airlines and depress their market capitalisation, as indicated by the difference in the market value between Air New Zealand's A and B shares. The former, which are limited to New Zealand nationals, have consistently traded at a lower value than B shares, which may be held by either New Zealand or foreign nationals (sub. 6, pp. 9–10).

This issue was even deemed to be important for US airlines. The US National Commission to Ensure a Strong and Competitive Airline Industry (1993) envisaged the long-term development of more liberal cross border airlines investment. However, as a short-term measure it advocated '... expanded access to international capital markets by allowing larger investments from foreign investors under the current bilateral system' (p. 21). It also proposed that foreign investors be able to hold up to 49 per cent of the voting equity in US airlines, up from the then (and still current) limit of 25 per cent.

The cost and availability of capital is an important issue in Australian aviation. Australia's economy, although substantially larger than New Zealand's, may be too small to provide sufficient equity capital for Australian airlines. The Australian Government interprets the ownership and effective control constraints in many ASAs as restricting foreign ownership of Australian international airlines to 49 per cent. Foreign ownership and control rules have been interpreted differently for Qantas and other Australian airlines (Chapter 4), but a common feature is that foreign airlines are restricted to owning no more than 25 per cent individually, or 35 per cent in aggregate. These restrictions may raise the cost and availability of equity capital, and distort choices between equity and debt capital given that access to debt is not constrained by aviation regulation.

Currently, both Ansett International and Qantas have the maximum foreign equity allowable, suggesting that there may be unsatisfied foreign demand for investment in these companies. Some financial market observers have estimated that the Qantas share price is 10 per cent lower than it would be in the absence of foreign investment restrictions. Any increase in the cost of equity capital flows through to the choice of debt versus equity and thereby distorts capital structures. Airlines should have flexibility in financing their operations and

developing their corporate structures. The existence of a cap on foreign ownership limits this flexibility.

6.1.2 Input costs

The nature of international aviation means that airlines need to purchase inputs in many locations. Aircraft must refuel in other countries and take on provisions. Further, repairs may be necessary in foreign locations requiring parts and equipment to be brought in. Airlines also need access to overseas terminals and baggage and freight handling services. One initial reason for regulating the international aviation industry was to guard against countries using their sovereign rights to discriminate against visiting airlines by charging higher rates of taxes or user charges. Consequently all ASAs contain some 'doing business' rules such as:

- exemption from customs duties and other charges on aircraft stores, spare parts and fuel and lubricating oils;
- the non-discriminatory application of fees for using aviation facilities and services such as terminals, and baggage handling; and
- the rights to establish offices, repatriate funds and maintain staff in the territory of the other party.

These provisions ensure the uniform treatment of airlines in all countries, and have been an enduring feature of the regulatory system.

6.1.3 Operating costs

The regulatory system affects where, how and when airlines can fly. Thus it affects airlines' ability to operate efficient networks and their revenue (Section 6.2). To the extent that airlines cannot use the least cost combinations of aircraft types to carry passengers and freight, the costs of operating existing networks are higher than they otherwise might be (technical inefficiency). Further, they may be prevented from flying the optimum sized and configured network (allocative inefficiency). Thus, costs may be reduced as airlines are able to operate the right aircraft at the right frequencies on an existing route. Airlines, by changing the design of a network and increasing its size, may also be able to decrease costs through economies of scale and scope.

Many features of ASAs restrict the development of efficient networks. These include capacity constraints (third and fourth freedoms), lack of fifth and seventh freedoms, break of gauge restrictions (which limit the ability to

substitute one type of aircraft for another to operate a fifth freedom), and the ownership and effective control constraint on foreign investment in airlines.

Ownership and control

The major effect of ownership and control restrictions is to prevent the merger and acquisition of international airlines across national boundaries. Consequently, airlines are constrained in achieving the efficiency benefits of operating a larger and potentially better integrated business. Air New Zealand argued that:

As airlines strive for greater efficiencies, they consider the benefits of consolidation. However, the normal commercial process of acquisition and/or merger is not available due to restrictions contained in bilateral agreements that are designed to ensure that ownership and control of airlines remain with nationals of the countries where they are based (sub. 6, p. 5).

Growth through merger or acquisition enables airlines to achieve economies of scale and scope by consolidating airline functions. The merger of two airlines, for example, may allow them to consolidate their ground handling, maintenance, information technology and various managerial functions.

Restrictions on foreign investment in airlines and their ability to merge have prompted airlines to seek other ways of achieving the same benefits. The Australian Competition and Consumer Commission argued that:

With takeovers, buyouts and mergers effectively prevented by the substantial ownership and control clause, airlines have resorted to alliances to try and achieve objectives similar to that which a takeover would achieve (sub. 49, p. 7).

The use of alliances and codesharing has grown in recent years as a means of minimising airline costs, extending market reach and increasing airline profitability. Indeed, Qantas argued that mergers were not necessary to capture these benefits:

... if we [were] looking to buy equity into another airline, then generally speaking we would prefer to form a commercial agreement with them to get all the benefits without the capital outlay that's involved (transcript, p. 126).

However, an alliance may not be able to achieve the same level of operational integration or the same cost savings possible within a single firm. Air New Zealand claimed that 'alliances have become a substitute for acquisitions or mergers that deliver some, but not all, of the benefits' (sub. 6, p. 5).

One reason is that alliances can involve significant costs, particularly the costs of negotiating and managing the alliance, maintaining separate management for the alliance partners, and monitoring the performance and benefits of the alliance partner. Where alliances are complex and wide ranging, these

negotiations can be time consuming and costly (IC 1997). Some past alliances have failed or been short lived, highlighting the difficulties of reaching agreement or realising the benefits of alliance arrangements.

Ansett illustrates the distortion to company structures and the increase in costs imposed by the current ownership and control provisions for national designation. Ansett Holdings is half owned by News Corporation and Air New Zealand. Although it is a SAM airline, it does not meet the requirements to be called Australian-owned and could not be designated as an Australian carrier for international operations. Ansett International was set up as a separate majority Australian-owned company to comply with the ownership and control rules for international designation.

Ansett (both domestic and international arms) and Air New Zealand are attempting to achieve with an alliance at least some of the commercial goals that in a free market could be achieved by merger but which are currently prohibited to them. Chapter 9 discusses further options which would facilitate closer links between Australian and New Zealand carriers.

Fifth and seventh freedoms

Most of Australia's ASAs include provisions for fifth freedom rights, but these are limited in quantity and available for only a small number of routes. The Department of Transport and Regional Development (DTRD) (sub. 33) argued that Australia's scope to offer beyond rights to foreign carriers is limited by its geographic location which offers little other than trans-Tasman services or intermediate points for long-haul services over South-East Asia.

Restrictions on fifth and seventh freedom rights prevent airlines from developing efficient networks based on overseas hubs. Australian airlines can hub out of Australian ports (principally Sydney), but they have only limited ability to develop their own hubs in other countries.

By emphasising third and fourth freedoms, the system has encouraged point-to-point services and hindered the development of efficient networks (including hub and spoke operations). Some countries such as Singapore and Thailand have been able to use sixth freedom rights to hub through their airports, but still have only limited rights to hub out of most other countries.

Air New Zealand argued that fifth freedom rights are vital to support airline operations, particularly on long-haul routes and 'thin' routes where traffic is light and markets are developing. It also argued that fifth freedom rights allow carriers to operate routes with greater frequency than can be sustained by third and fourth freedom traffic alone. Thus, airlines would be able to operate

services with lower overall costs, and by increasing the size of their network they would be able to capture important marketing advantages.

Seventh freedom rights are similar to fifth freedom rights in that they allow carriers to operate services between two foreign countries. However, they do not require the carrier to originate or terminate the service in its home country. The absence of this requirement enables airlines to minimise the network costs of operating services between foreign countries by not linking them with other third and fourth freedom services. It also enables carriers to make the most effective use of their hubs.

Australia's ASAs do not provide for carriers to exercise seventh freedom rights. FedEx (transcript, p. 78) argued that the lack of seventh freedom rights under Australia's ASA with the United States means that a flight into Australia must originate and terminate in the United States regardless of whether there is sufficient demand for that particular segment. Thus, it may restrict the ability of carriers such as FedEx to operate a frequent and commercially viable service at minimum cost.

Qantas (sub. 25) argued that as the momentum builds to break down airline nationality boundaries, seventh freedom rights will become increasingly important for Australian carriers to compete for routes in Asia, and to seek the lowest cost structures for their international operations.

Codesharing

Codesharing is an important tool for airlines to minimise the costs of operating services. By selling seats on a flight operated by another carrier, codesharing enables an airline to make direct cost savings by rationalising services or establishing market presence on a route without actually operating on it. Thus, both airlines may be able to save on fuel, labour and other variable costs, as well as making more effective use of aircraft and other overheads.

Qantas argued that codesharing has been an important strategy for reducing its operational costs on certain routes:

... Qantas avoids capital acquisition and ongoing operating costs by codesharing on American Airlines' services to six cities in the United States from Los Angeles (sub. 25, p. 11).

Codesharing may also affect other administrative costs such as the cost of operating computer reservation systems. Computer reservation systems have become an important competitive tool for airlines, but they involve high investment costs and continuing additional costs.

Australia has progressively negotiated codeshare provisions into its ASAs, though these provisions do not yet exist in all of Australia's arrangements. DTRD argued that the exceptions are ASAs which are '... older, or less active or are held with States that are not currently interested in codeshare arrangements' (sub. 60, p. 13).

Cabotage

Restricting access by foreign carriers to the Australian domestic market gives the Australian carriers a solid base from which to extend into international aviation. The same applies to most other countries, with the exception of city economies such as Singapore and Hong Kong. Integrating domestic and international services allows airlines to achieve:

- operational synergies and efficiencies by being able to switch capacity and aircraft between the domestic and international sectors; and
- network advantages such as economies of scope and traffic density as well as the marketing advantages of operating a combined domestic and international network.

Capacity and frequency

Given the fixed costs of developing and maintaining a route, a shortage of allowed capacity may increase the average cost of providing services. The marketing and sales promotion costs of a route are largely independent of the number of flights operating on the route. Extra capacity enables some economies of scale by spreading these costs over more passengers. Economies of scope may also be achieved by spreading indirect administrative costs over more services.

Ansett International (sub. 19) indicated that capacity restrictions on certain routes have precluded it from obtaining sufficient capacity to operate daily frequencies on most of its international services. Given that higher frequencies may help an airline to draw on the latent demand for air services, a lack of capacity which results in sub-optimal frequencies may reduce the commercial viability of some routes. The South Australian Government stated that 'commercial sustainability on a single route may require a much higher level of frequency than that required in the context of a wider network' (sub. 3, p. 17).

The key point is that there is a trade-off for airlines: they can operate fewer services per week and achieve some economies by using bigger aircraft, or they can increase revenue by operating more services using smaller, but more expensive (on a per unit basis) aircraft. These sorts of decisions should be entirely commercial and unhampered by regulation.

6.1.4 Compliance costs

Like any regulatory system, the bilateral system of regulation involves some compliance costs and obliges international airlines to devote considerable resources to tracking negotiations, liaising with DTRD and the IASC, and participating as technical advisers on delegations. ASAs which require periodic renegotiation impose higher compliance costs on the industry, and are more costly to regulate, than more liberal arrangements where prior agreement allows for further increases in capacity and other rights, or where there are no restrictions at all.

Ownership and control restrictions also impose costs on airlines in monitoring their compliance with foreign ownership constraints. The cost for Qantas includes monitoring its share register. Qantas indicated that it traces ownership through various structures, but it has not specifically costed the exercise (transcript, p. 123).

Complying with safety standards also involves costs. But a good safety record may be an important marketing advantage, thus warranting expenditure in excess of what may be required to meet regulatory standards. Qantas claimed that:

... [it] has an established reputation for on-board and on-ground safety. To maintain this, Qantas spends around \$40 million per annum in meeting technical and operational specifications in excess of the minimums laid down by regulatory authorities (sub. 25, p. 14).

6.2 Effects on airline revenues

Some regulatory restrictions act to decrease the potential revenue from operating certain services. Even if a carrier is technically efficient, regulatory restrictions may restrict its ability to pick up freight and passengers at different points in the network. Restrictions on fifth freedoms, cabotage and stopover rights may all constrain the ability of airlines to optimise passenger and freight loads over different stages in their networks.

6.2.1 Fifth freedoms

If airlines are able to land in certain places to discharge passengers and cargo, but are unable to take on further passengers or cargo for a subsequent stage of a round trip, they will be discouraged from operating the second stage. Thus the lack of fifth freedom rights for foreign carriers can limit the viability of

international passenger services to and from Australia. The New Zealand External Aviation Policy Committee argued that:

... in negotiating with third countries, the lack of access to trans-Tasman traffic for those third-country airlines is often cited as a constraint impacting on the viability of any service they may wish to operate to New Zealand in conjunction with services to Australia (sub. 34, p. 5).

Aerolineas Argentinas (sub. 9) claimed that the lack of fifth freedom traffic rights between Auckland and Sydney (until recently) had prevented it from making the most of the revenue opportunities on the route between Buenos Aires, Auckland and Sydney, affecting the viability of the service. It claimed that:

The lack of these rights prevented Aerolineas Argentinas from realising full revenue opportunities on the route necessary to offset operating costs which on long, thin routes are high. Aerolineas Argentinas nevertheless persisted (transcript, p. 365).

By affecting the overall yields of some routes, restrictions on fifth freedoms limit inbound tourism. The Department of Industry, Science and Tourism (DIST) (sub. 31) argued that limits on the beyond rights of some foreign carriers have constrained potential inbound tourism growth to Australia from the Republic of Korea, South America and New Zealand.

6.2.2 Stopover rights and city designation

Restrictions on own-stopover rights (for example, Korean Air carrying passengers on to Sydney which it had brought to Brisbane some days earlier), limit the scope for foreign carriers to obtain revenue from operating services to two or more points in Australia. Clearly the same applies to Australian carriers operating between points within other countries.

Airlines, in the absence of own-stopover rights, can choose to serve either the two or more designated cities with the one flight (but with reduced loads between those cities) or (presuming that capacity and frequency conditions are not constraining) each city with individual flights. Whatever the choice, their passengers who wished to visit both cities would need to use domestic services. This may not greatly inconvenience such passengers, but would reduce the viability of operating services to Australia. Own-stopover rights allow airlines to increase the revenue gained from operating the domestic stage of a loop and thus to improve yields.

If own-stopover rights are absent or insufficient to meet their needs, foreign airlines are constrained in offering travel packages that involve multiple

domestic stops. Thus, foreign carriers are restricted in developing secondary gateways and generating (and responding to) market growth opportunities.

6.2.3 Cabotage

Restricting cabotage rights for the carriage of passengers and freight to domestic airlines reduces competition on domestic routes. These restrictions help keep fares and freight rates higher than they otherwise might be, boosting domestic airline revenue at the expense of domestic consumers. Allowing foreign carriers some cabotage rights could improve competition in the domestic market. A relatively limited form of cabotage would allow a foreign airline stopping at two or more points within Australia to carry domestic passengers and freight (consecutive cabotage or eighth freedom). A more fundamental form of cabotage would allow dedicated domestic flights by foreign carriers (stand alone cabotage or ninth freedom).

Granting consecutive cabotage rights to international airlines may allow them to increase revenue on trips into and out of Australia. For example, the ability to carry passengers or freight on the route from Perth to Australia's east coast and vice versa, might improve South African Airways' overall yield on flights to and from South Africa, and could lead to reduced fares and/or increased frequency. The Northern Territory Government stated that cabotage rights for foreign carriers between Darwin and other cities would improve airline returns. It said:

The benefits of cabotage rights would be the ability for carriers using Darwin as a setdown point en-route to other Australian cities to earn revenue on the sectors beyond Darwin and therefore increase the carrier's revenue raising capacity and hence its commitment to Darwin (sub. 40, p. 4).

A number of participants including Ansett, Qantas and the Australian and International Pilots Association (AIPA) opposed granting cabotage rights to foreign carriers. Ansett argued that foreign airlines could price their services on domestic legs at little more than the marginal cost of the flight, significantly less than average costs. It was argued that this would make it difficult to make a satisfactory return on investment in both the airline itself and its infrastructure. Ansett claimed that:

It is most likely that foreign carriers would engage in 'cherry picking' ie. carry domestic traffic on the most profitable routes. Incumbent airlines would need to counter any loss of profitability on routes affected by cabotage and this could mean a reduction in the number of services provided on these routes, or the reduction or withdrawal of services from less profitable routes, with consequential loss of amenity to passengers, including those making connections to other parts of the domestic network. (sub. 19, p. 30).

The degree to which additional competition on the more profitable domestic routes would compromise the airlines' abilities to continue to operate other less profitable services is questionable. Like the new entrant, Qantas and Ansett would price as much above marginal cost as they could. Anything above marginal cost would allow them to make a contribution to the joint and common costs of operating their network. Additional competition may reduce this contribution.

Granting foreign carriers the opportunity to operate domestic sectors is unlikely to result in Australia's domestic carriers losing a large amount of market share in the passenger market. The inconvenience of travelling with an international carrier for domestic travel could limit the market appeal of this type of service. For example, Australian domestic travellers are allowed to travel on domestic legs of international flights operated by Australian airlines, but must: '... carry appropriate identification, pass through normal customs control procedures and are subject to examination if required' (sub. 55, p. 1). These problems could be avoided by having full customs and immigration clearance at the first port of call (as in the United States), but this would inconvenience international airlines and their passengers.

Other disadvantages of consecutive cabotage include the poor frequency of service, delays associated with international flights, and poor connections between domestic and international flights. For these reasons it is expected that only price sensitive leisure travellers would be attracted to this option, rather than time sensitive business travellers. While the domestic airlines would lose some business to the new services, their profitability may not be greatly affected, as the bulk of airlines' profits come from business and other price insensitive passengers.

Entry may occur on the longer haul Australian sectors, where aircraft used on international flights are more suited. For example, Westralia Airports Corporation estimated that if current restrictions were lifted, traffic to Perth could increase by 5 to 10 per cent (transcript, p. 169).

Cabotage reform would need to be accompanied by a review of the way tax exemptions on fuel are granted to international carriers.¹ This is an important feature of all ASAs, but to treat domestic and international carriers on the same basis may require that some distinction be made between the domestic and international components of a flight in assessing liability for the excise tax on fuel.

¹ DTRD has mentioned that granting cabotage rights may jeopardise tax exemptions for international carriage (sub. 60, p. 14).

Section 6.5 addresses the implications of granting cabotage rights to foreign carriers for the carriage of freight.

6.3 Competition among airlines

The regulatory structure inhibits competition in many ways. It can prevent or deter entry, constrain capacity, and limit the potential for airlines to win market share. Most ASAs also contain price regulation in one form or another. Some routes are contested by third and fourth freedom carriers only, others are also subject to competition from fifth and sixth freedom traffic. The degree of competition varies widely across the routes in and out of Australia. To the extent that competition would occur in the absence of regulation, restrictions decrease economic efficiency by raising the price of air travel, reducing the range of services offered, and discouraging innovation and cost minimisation.

A problem in assessing regulatory impacts is the structure of aviation markets. Economies of scope and traffic density favour large airlines operating many services. On the demand side, a single carrier operating a long thin route with multiple frequencies will attract better business than multiple carriers who each operate one service per week. Thus markets tend to be concentrated with a small numbers of carriers operating on most routes. This applies even within the US domestic market, where many routes are highly concentrated despite the existence of a ‘competitive fringe’ of airlines capable of entry (Forsyth 1998).

Despite a trend to privatisation of airlines, and evidence of private airlines being more efficient than publicly owned airlines (Oum and Yu 1997), some airlines still have substantial public ownership or require substantial subsidies. It cannot be presumed that these airlines respond to normal commercial incentives. Instead of focusing on shareholder value, they may be managed for national prestige, employment enhancement, technology transfer, or defence reasons, all of which might require government subsidies. The continued use of substantial government subsidies is an obstacle to achieving economically efficient air services, and has important implications for competition in a less regulated international environment.

6.3.1 Market entry and competition

The bilateral system of regulation contains numerous barriers to entry. These are important because entry to a market, or the threat of entry, can be an important competitive discipline on the behaviour of firms. However, like most markets, aviation markets are not perfectly contestable. Entry is never entirely costless, some entry costs are not recoverable, and incumbents have the ability

to respond quickly to entry of a new competitor. Nevertheless, entry can occur where regulation permits.

The regulatory system constrains the potential for entry in many ways. Capacity constraints, absence of fifth or seventh freedoms to compete on a route, investment constraints, and restrictions on codesharing can all be important barriers to entry.

Capacity

Constraints on capacity on certain routes may enable airlines with existing capacity to maintain higher load factors and higher prices than otherwise. This occurs where other airlines designated under the agreement are prevented from expanding their existing services or from entering the route. Incumbent carriers will have an incentive to use capacity — even when load factors and yields are relatively low — if that will prevent the loss of that capacity to another designated carrier. Some countries appear to use capacity constraints to protect their carriers (Chapter 5).

The effect of capacity constraints on competition is illustrated by the Japan-Australia ASA. Australia's third and fourth freedom capacity to Japan was almost all in use in February 1998 (Chapter 5; Appendix E). Aircraft may not have been flying full, so some seats would have been available. Nevertheless, the capacity constraint meant that at the time, Australian airlines (using almost 97 per cent of Australia's entitlement) could not substantially increase the number of flights operated to Japan. The designated Japanese carriers on the other hand were much less constrained, and were using only some 77.5 per cent of their entitlement.

Japanese carriers have been shown to be relatively uncompetitive by world standards, and Qantas appears to be relatively efficient by comparison (Chapter 2). It is not known whether the Australian airlines would have chosen to increase services in the absence of the capacity constraint: they may have been satisfied to operate the then current levels of service. However, as long as the ASA constrains capacity, Australian airlines cannot choose to operate additional services, and hence cannot take market share from the Japanese carriers beyond what they can supply with their existing capacity. More recent evidence shows that capacity utilisation on this route has decreased quite significantly since February 1998 (Chapter 5) in response to a downturn in the Australia-Japan market, but the point remains — capacity restrictions have the potential to stifle market driven competition.

Competition from third country carriers

Third country carriers provide an important source of competition on some routes where they have the appropriate rights under their ASAs with Australia and other countries. Depending on the route, Australian carriers may compete not only with our bilateral partner's carriers, but also fifth freedom and sixth freedom carriers.

DTRD acknowledged that:

For Australia, the competitive benefits of these third country carriers are very important and are taken into account in determining net national benefit, as Australia assesses proposals for capacity increases and trade-offs with other rights which may be offered (sub. 33, p. 9).

Given the historical development of Australia's aviation industry, sixth freedom carriers are an important source of competitive pressure on routes through to Europe, as noted in Chapter 5. This competition comes from carriers operating from countries that are conveniently placed to operate as hubs between Australia and Europe. Singapore Airlines, for example, is able to use third and fourth freedom rights under the UK–Singapore and Singapore–Australia ASAs to operate flights from London to Australia in direct competition with Australian and UK carriers using third and fourth freedom rights under the Australia–UK ASAs.

Fifth freedom carriers are important sources of actual or potential competition to Australian carriers on many routes. Under its fifth freedom rights under the Australia–New Zealand ASA, Air New Zealand operates services from Australia to several Asian destinations and the United States. Similarly, the exchanges of fifth freedom rights between Australia, Thailand and Hong Kong enable carriers of all three economies to compete on the Australia–Thailand, Australia–Hong Kong, and Hong Kong–Thailand routes.

Some participants were critical of Australia's apparent reluctance to grant further fifth freedoms to other countries. DIST claimed that third and fourth freedoms have been 'regarded as a 'national right' by some countries under the current system of bilateral agreements' (sub. 31, p. 18), not to be eroded by fifth freedoms. It also argued that Australia's failure to agree to additional beyond rights for New Zealand carriers has denied Australia the benefits of additional competition.

The Commission recognises the importance of fifth freedoms in generating competition on routes into and out of Australia, and that fifth freedoms for Australian carriers to operate between two other countries are important for developing efficient networks.

It has already been noted that Australia does not have seventh freedom rights in any of its ASAs. If they were available, seventh freedom rights may also lead to the entry of third country carriers, and thus provide additional competition for Australian and other carriers.

Restrictions on foreign investment

The ownership and effective control restrictions prevent foreigners from establishing new airlines in countries for the purposes of providing international air services. These restrictions could hinder the entry of new airlines wishing to operate international air services into and out of Australia, and limit the opportunities for Australian aviation interests to establish new airlines in other countries. British Airways noted that the maintenance of a restriction on foreign investment, despite the deregulation which had occurred in the United Kingdom, delayed the development of competition in the UK domestic market.

British Airways stated that:

The big change that EU liberalisation brought to the market was the opportunity for companies owned by citizens of countries other than the United Kingdom to commence services. Thus Irish owned Ryanair and Greek-owned EasyJet were able to enter the market and have done so. We see a similar pattern elsewhere with, for example, British Airways' subsidiary Deutsche BA providing competition in Germany and British-owned Virgin Express competing internationally out of Belgium (sub. 36, p. 2).

While these developments may increase the level of competition within the EU, airlines which have broad EU ownership and control may not be eligible to exercise rights under ASAs negotiated with non EU countries.

Codesharing

Codesharing has the potential to promote competition among carriers on 'thin' routes where it may not be commercially sustainable for multiple carriers to operate services. Codesharing may be an attractive option to the operating carrier in these circumstances when the additional traffic generated by the non-operating carrier lowers operating costs and makes it feasible to operate more services.

The impact of codesharing on competition will depend on the extent to which the carriers operating on a codeshare basis compete with each other on the same route, or use codesharing to connect their services. Where carriers are already operating on the same route, and have relatively high market shares, codesharing is likely to reduce competition.

The Australian Competition and Consumer Commission commented on the potential anticompetitive effects of codesharing:

In the case of an operating carrier selling seats to a non-operating carrier, such arrangements may lead to a reduction in price competition as the operating carrier knows the price that it sells seats to the non-operating carrier. This places the operating carrier in a privileged competitive position and may enable it to establish air fares at a level higher than in a competitive market. Similarly, the non-operating carrier has a disincentive to compete too vigorously as it may run the risk of having the code share operation terminated (sub. 49, p. 8).

The operating carrier may be in a dominant position for pricing seats, but the two carriers may still compete in marketing and selling tickets, and in providing connecting services. Codesharing may also provide a means for carriers to start up services and test new routes. Thus, it can be an important precursor to the development of more vigorous competition when carriers operate services in their own right. Codesharing may also enable carriers to operate with greater frequencies and to connect with other carriers' services through a hub.

Many participants emphasised the importance of having the flexibility to operate on a codeshare basis. DTRD commented that:

Codesharing offers new and incumbent carriers the opportunity to enter a market or increase traffic and revenue and obtain economies of scale and density by expanding their networks without incurring the major sunk costs associated with operating additional aircraft (sub. 33, p. 25).

Qantas also stated that 'without the ability to compete on this basis — airlines both foreign and Australian — will be at a distinct commercial disadvantage' (sub. 25, p. 16).

The inclusion of codesharing rights under most of Australia's ASAs allows airlines flexibility in terms of how they will contest markets. Thus, they have the potential to generate greater competition and to minimise the costs of operating on certain routes and the overall network. The omission of these rights from the remainder of Australia's ASAs restricts the scope for both Australian and foreign carriers to enter new markets and to minimise costs, though as noted earlier (Section 6.1.3) the restriction may not in fact be significant.

Computer reservation systems

The development and use of computer reservation systems became an important competition issue in the late 1980s. An airline, by developing its own system which travel agents and other airlines could then use, gained a competitive advantage by ensuring that its flights were listed more prominently on computer displays used in booking tickets. This issue became such a concern that it is

now specifically addressed in ASAs, and is covered under the General Agreement on Trade in Services.

6.3.2 Market concentration

The bilateral nature of regulation means that the designated airlines of the partner countries often dominate the air services between the two countries. In many cases this means that a small number of airlines supply most of the direct services. Bilateral arrangements, by generally constraining the potential for entry and the ability of designated carriers of one country to take market share from carriers of the other country, help preserve high numbers of airlines at the global level, but relatively high market concentration on a country pair basis.

Calculation of Herfindahl-Hirschman Indices (HHI) offers some perspective on the degree of concentration in particular markets and thus the potential for competitive behaviour. These indices are calculated by summing the squared market shares (expressed as a decimal) of each airline operating between a country or market pair (Table 6.1).

Table 6.1 Market concentration by country or region, 12 months to end April 1998

<i>Passenger services between Australia and:</i>	<i>Herfindahl-Hirschman Index (HHI)</i>
New Zealand	0.47
Japan	0.29
United Kingdom	0.16
United States	0.32
Indonesia	0.28
Singapore	0.28
Hong Kong	0.31
Malaysia	0.30
Taiwan	0.17
Korea, Republic of	0.22
Germany	0.19
China	0.18
Thailand	0.26
Canada	0.33
Italy	0.23
Fiji	0.64
Philippines	0.37
Papua New Guinea	0.43
South Africa	0.28
France	0.17
India	0.29
Netherlands	0.16

Note: A high HHI figure indicates more market concentration. A pure monopoly would have an HHI of 1.0; a duopoly with each firm having equal market share would have an HHI of 0.5; and atomistic competition would have an HHI approaching zero. Market shares are based on origin and destination traffic.

Source: Commission estimates based on DTRD (1998).

These results indicate that most airline markets are not highly competitive, with many HHIs indicating a high degree of concentration. The HHI for the Australia-New Zealand route, for example is 0.47, a reflection of the dominance of Qantas and Air New Zealand, which had market shares of approximately 41 per cent and 42 per cent respectively in the twelve months to end April 1998. Other markets such as the United Kingdom show relatively lower market

concentration, which is partly the result of competition from sixth freedom carriers.

6.4 Effects on passenger airfares and services

6.4.1 Price competition

Competition between airlines has been shown to result in lower prices, and an increased range and quality of services. Given the considerable differences among groups of customers, and the abilities of airlines to differentiate their prices, the effects of competition are likely to be different from one group to the next. Competition for price-sensitive travellers, such as people travelling for leisure reasons, is likely to lead to lower prices, whereas competition for price-insensitive travellers such as business people could focus on non-price aspects such as frequency of service, in-flight services, and the use of airport lounges. Empirical research supports this behaviour.

The Commission undertook some modelling of the effects of Australia's international aviation arrangements on the market for air travel to and from Australia (Appendix F). Specifically, the Commission modelled the competitive effects of entry of a new Australian carrier, such as Ansett International, on prices, Australian and foreign economic welfare, and net tourism. The results suggest that increased competition tends to reduce prices, and that increases in consumer welfare more than offset losses in the profits earned by airlines on affected routes. For example, where airlines are assumed to have some discretion in setting prices, a price fall of almost 8 per cent occurs in the Indonesian market, and a fall of almost 7 per cent occurs in Hong Kong as a consequence of Ansett's entry (Table 6.2).

The Commission's results are broadly consistent with those of Savage, Smith and Street (1994), and Dresner and Tretheway (1992b).

Savage, Smith and Street (1994) estimated the effect of competition on air fares in Australian international aviation markets. Their econometric model used three proxies for competition: the number of airlines competing on a route; market concentration (using a Herfindahl-Hirschman Index); and a qualitative measure of regulation. The regulation variable was included to account for the degree of 'liberality' in the ASA governing air services rights on each route. They found strong evidence that discount fares declined where three or more airlines were competing on a route, and there was some evidence of business class fares increasing as the number of airlines increases. They also found strong evidence that liberal regulation decreases the best discount fare and

increases the business class fare. They suggested that discount fares are 16 per cent lower on liberal routes than on non liberal routes.

Table 6.2 Estimated effects of Ansett's entry on changes in price and quantity by market, 1997

<i>Between Australia and:</i>	<i>Quantity</i>	<i>Prices</i>
	%	%
China	2.6	-4.4
Hong Kong	5.3	-6.8
Indonesia	3.4	-7.7
Japan	3.0	-4.3
Korea, Republic of	0.6	-2.4
Malaysia	2.7	-4.0
Taiwan	2.7	-4.3

Source: Commission estimates.

Savage, Smith and Street explained these results by suggesting that:

As competition cuts into profits, airlines move to segregate business and non business traffic, because business traffic is generally less price sensitive than non business traffic. ... Airlines then compete for these high yielding business passengers on the basis of service quality, such as more frequent departures, the provision of airport lounges, or better in-flight systems (1994, p. 16).

These results are generally consistent with those of Dresner and Tretheway (1992b) who estimated the effects of market structure on the price of airfares in the US international aviation market. Dresner and Tretheway investigated the effect of liberal bilateral agreements on the price of discount and full fare tickets. Their study revealed that the United States procompetitive air transport policy:

... had a significant effect, reducing discount fares by an average of 35 per cent, other things being equal. This may have resulted in a welfare gain of roughly \$325 million in 1981 alone. In contrast, the policy has had no statistically discernible effect on the 'full fare' which business and other non-discretionary travellers use (1992b, p. 183).

The regulation of charter services may also have important effects on competition and airfares in the lower end of the market. Facilitation of charter services can provide opportunities for the development of low cost leisure and major event markets. The Australian Tourist Commission (ATC) claims that recent charter initiatives have significantly contributed to the expansion of the lower-cost end of the market for travel between Australia and the United

Kingdom, Canada and New Zealand. The ATC noted that charter operators Britannia and Air Tours have developed the lower cost market on the Australia-UK route by offering lower fares than the scheduled carriers. It also claimed that the entry of charter operator Canada 3000 has provided Canadian travellers with direct access to Australia at more competitive prices than those offered by scheduled airlines (sub. 29).

The influence which charter services may have on the airfares of scheduled services depends on the degree to which the two services are substitutes for each other, the level of competition on the route concerned, and the actual or perceived ability of charter operators to take market share from scheduled operators. On most routes to and from Australia, charters have only a very small proportion of the market, and other things being the same may not be regarded as a substantial threat to scheduled airlines. In the 12 month period to November 1997, the charter operator Britannia operated the largest charter service to Australia, but accounted for only just over 2 per cent of the origin and destination traffic between Australia and the United Kingdom. The presence of a number of sixth freedom carriers on that route appears to have been a more substantial influence on competition. However, in some more concentrated markets such as Canada and New Zealand, charter operators may have an important effect. For example, Kiwi Travel International Airlines — which initially started as a charter operator before offering scheduled services — was able to capture only a small part of the Australia New Zealand market. However, it had a substantial effect on airfares at the discount end of the market (Section 4.2.4).

These results indicate generally that deregulation has been an important precursor to lower airfares in the discount end of the market. To the extent that the current set of ASAs constrain competition, further price reductions may be possible. This would be likely to benefit leisure travellers more than business travellers.

Impacts on tourism

Regulations that lead to higher inbound international airfares reduce the number of inbound foreign tourists, and Australia's export of tourism services. Higher airfares also reduce tourists' expenditure on accommodation, shopping, restaurant meals, guided tours and internal transport. However, higher outbound international airfares induce more Australians to travel domestically instead of overseas, benefiting local tourism operators. Thus they encourage import substitution — that is, the supply of domestic rather imported tourism.

The importance of airfares to tourism was highlighted by several participants in this inquiry. DIST (sub. 31) indicated that much of the recent growth on the

trans-Tasman route resulted from significant discounting associated with the entry of Kiwi International (which has since liquidated) and its Air New Zealand subsidiary competitor Freedom Air in 1995. Despite being characterised as a mature market, visitor arrivals to Australia from New Zealand increased by around 25 per cent over the twelve month period when both airlines operated on the route (Chapter 4).

Regulations that lead to higher airfares are a tax on exports of tourism services. Higher airfares sustainable under constrained ASAs impose net costs on Australian tourism operators as well as on Australian tourists. Higher airfares impede the development of inbound foreign tourism, and the tourism choices of Australians, more than offsetting any benefits to tourism operators from more Australians travelling at home instead of overseas.

These issues are discussed further in Section 6.7.1

6.4.2 Non-price effects

Regulations that restrict the number of airlines serving particular routes, and the extent to which they can compete with each other, may limit the range of service levels — safety, ticket conditions, check-in and on-board facilities — from which passengers can choose. Capacity restrictions may constrain the introduction and expansion of direct flights, the timing and choice of services, and the ease and speed of connections, for example. The costs of less direct services are incurred by passengers, and potential passengers (in the form of increased travel time, lower availability of on-demand seats and less convenience), and by Australian tourism operators (in the form of lower levels of inbound tourism).

Frequency

Frequency of service is one of the most important non-price determinants of demand. Lower levels of flight frequency reduce the opportunity of passengers to satisfy their itineraries and seat requirements, and reduce the potential for airlines to draw on the latent demand for air services. More convenient flight scheduling has been found to be important to business travellers (Morrison and Winston 1989).

Restrictions that affect the availability of services can be an important issue in the competition for discretionary travel by potential tourists. The Australian Tourist Commission stated that:

... where capacity is tight, and load factors are high, there are potential impacts on all aspects of the travel distribution system. If wholesalers and travel agents (retailers) experience difficulty in obtaining seats to Australia, they are likely to

‘cross sell’ the potential Australian traveller to other more easily obtainable destinations ... eg Hawaii or the USA (sub. 29, pp. 8–9).

Product range

Even where capacity is available to book seats on flights into Australia, difficulties in packaging international with domestic services may discourage tourism. The quality of service which foreign airlines can offer within Australia is limited by restrictions on own-stopover rights, and restrictions on domestic codesharing. The availability of these rights improves the ability of overseas airlines to market a more comprehensive range of Australian tourism destinations, and generate additional inbound tourism. Codesharing can provide attractive, relatively seamless service to foreign tourists, but is not possible if foreign airlines do not have traffic and market access rights to cover secondary gateways.

Limitations on network development based on fifth and seventh freedoms restrict the quantity and variety of services which airlines can offer. This influences the degree to which Australia can be marketed as a tourism destination. The New Zealand External Aviation Policy Committee demonstrated that a large proportion of visitors to New Zealand — particularly those from long-haul markets in North America, North Asia and Europe — combine a visit to New Zealand with one to Australia.

The 1996 International Visitors Survey conducted by the New Zealand Tourism Board indicated that 58.5 per cent of all third-country visitors to New Zealand visited Australia in the same trip ... Australia and New Zealand are perceived, in many of our major markets, to be a ‘single’ destination (sub. 34, p. 4).

Limitations on the quantity of fifth freedoms available to third country carriers to offer air services between Australia and New Zealand therefore may be constraining the potential for tourism to Australia and New Zealand.

Safety

Some participants in this inquiry were concerned about the possible effects on airline safety of liberalising the bilateral regulatory regime. Maintaining the current regime, some argue, is important for underpinning the profitability of airlines and their expenditure on safety (crew training, maintenance, investment in new aircraft, etc.). For example, the AIPA highlighted a possible link between deregulation, airline profits and investment in safety:

... the bilateral approach in the form of ASAs has had the benefit of enabling Australia to monitor and ensure safety certification of foreign carriers flying to, within and beyond Australia. ... regulation, whilst raising costs and restricting the potential for competition, has upheld the quality of service in terms of airline

safety. In particular, where regulation has supported higher profitability in Qantas and Ansett and profitability is correlated with airline safety and performance ..., regulation has been responsible for higher airline safety (sub. 61, p. 10).

The AIPA was also concerned that consumers may have insufficient information on accident and incident rates to make informed decisions about airline safety investments. If such an asymmetry of information exists, it may encourage the carriers to invest less on safety than consumers would demand if fully informed (sub. 61).

Some empirical research on this subject where US carriers are concerned, suggests that there may be some links between profit and safety investment for small to medium sized carriers, but not for large carriers (Rose 1990, Rose 1992). Rose suggests that this may:

... reflect a greater degree of freedom for these carriers in choosing their safety investment levels. Information asymmetries or liquidity constraints may be less important for the largest firms in the industry, or the FAA may more tightly constrain these carriers through safety inspection and enforcement (1990, p. 959).

Rose qualifies her results by acknowledging that further research is required to test causality of the relationship between profits and safety (1990, p. 959). It is by no means clear in her work whether profits drive safety or vice versa. Airlines have an incentive to invest in safety if consumers have sufficient information to distinguish between 'safe' and 'unsafe' airlines. In that case rather than profits driving safety, it is possible that establishing a good record may lead to higher patronage and earnings.

It is difficult to draw any conclusions from Rose's work about the possible effects on safety of airlines servicing the Australian market, either under the current regime, or some alternative more liberal regime. The circumstances in the US domestic market are somewhat different from the international scene. Domestic deregulation in the US led to a number of new start up airlines entering the market, and the relatively few accidents of these carriers have helped skew the results. Liberalising the bilateral system of regulation may make it easier for start up carriers to enter Australia's international aviation markets, but its most probable effect will be to encourage more competition from large already established carriers from third countries. The fear expressed by AIPA is that competition could drive these and Australian airlines to lower their safety standards.

The small number of air accidents make it very difficult to establish any robust statistical relationships between accidents and potential causes. While 'incidents' are more common, the data on incidents are unsatisfactory, again making it difficult or impossible to establish robust statistical relationships. The Australian Services Union argued that:

... the Australian airlines industry is a very capable one and has a reputation of impeccable safety when compared perhaps to other areas. What we are concerned [about] is that if there are to be changes within the industry that safety isn't forfeited for what would be perceived to be short-term gain (transcript, p. 433).

But even if there were a link between liberalising the economic regulations governing international aviation and safety, maintenance of adequate safety standards would be best addressed directly through the development and enforcement of adequate safety regulations. As noted in Chapter 3, some countries are building on the ICAO basis for regulating safety multilaterally by adopting additional safety procedures in their ASAs. The Commission endorses the need for compulsory universal safety standards which airlines can choose to exceed if they wish. The keys to effective regulation of safety are a rigorous form of national designation (which does not necessarily require ownership by nationals), strict enforcement by the designating country, and effective monitoring by other countries.

6.5 Effects on users of air freight

The majority of freight services are provided as a by-product of passenger services. Hence the regulation of passenger services through ASAs can have implications for the supply and configuration of air freight services to and from Australia. As most of Australia's ASAs have been negotiated with passengers in mind, they do not always cater for the requirements of cargo operators. Increasingly though, specific freight conditions are being incorporated into ASAs.

The nature of air freight makes for a very different market from passenger services, hence regulations which might be limiting in one market may be unimportant in the other. One example of this is freight users who are not particularly sensitive about the time taken to deliver their freight and hence may be indifferent to the route taken. While such users would clearly want their freight delivered in a reasonable time, and presumably more quickly than via surface freight, they may accept less direct routes in exchange for lower rates. This gives them a wider range of choices over airlines and routes than passengers who are interested in relatively direct routes which conserve time. Competition is therefore quite vigorous, even within regulated markets.

Australia's inbound and outbound freight markets differ quite substantially. The inbound market is dominated by high value, non perishable goods. The outbound market is more mixed. In revenue terms, the largest single commodity exported is non monetary gold, followed more or less equally by computers and office equipment, and perishable primary products. By weight the great majority

of the outbound market is in perishable primary products many of which are quite low in unit value. Demand for air freight of these products is highly price sensitive.

6.5.1 Capacity constraints

In this and other inquiries (HRSC 1996) it was evident that freight capacity per se is rarely a limiting factor. On many routes there is substantial excess capacity available on passenger services, and many ASAs also contain dedicated freighter capacity, much of which is unused. The Government has been pursuing a progressively more liberal policy on air freight to reduce constraints on capacity, frequency and access points (Chapter 4). Consequently, dedicated freight airlines such as Cargolux, DHL and FedEx have been increasing their operations in Australia.

The liberal amount of capacity led the House of Representatives Standing Committee (HRSC) to conclude in its 1996 report *Jet Fresh: Paddock to Plate*, that there was adequate capacity overall. Examining the air freight regulatory environment, the HRSC found that capacity:

... does not present significant impediments to the export of perishable and time sensitive products. In general, available air freight capacity (on passenger flights, supplemented by dedicated freight services plus ad hoc charters during peak periods) is adequate to meet the current needs of exporters of perishable products (p. 29).

However, it also noted that:

... this should not be interpreted as meaning ... that the level of service offered by airlines (and forwarders) meets the level of service sought by exporters, such as providing direct routes into target markets, guaranteed delivery times, and access to space on preferred flights (p. 33).

The key point is that a surplus of freight capacity overall does not tell the full story. There are important spatial and temporal dimensions to the demand for air freight, and the scope for competition from third country carriers is constrained. With schedules and routes determined largely by airline passenger priorities, Australian exporters can be constrained in their ability to meet particular market requirements for such things as overnight delivery. For example, DFAT (sub. 52) argued that the scarcity of passenger flights from Australia to South America impeded the development of trade in high-value, time-critical goods and manufactures with that region.

The need for timely freight deliveries may create demand for dedicated services even where there is surplus freight capacity in scheduled passenger services. For example,

... DHL has committed a significant resource into the development of an overnight trans-Tasman service. In considering that service, the potential existed to utilise the capacity of some 60 passenger flights per week. However, the timing of these flights did not satisfy our client's needs. Accordingly, and despite the relative capacity that existed, DHL commenced its current dedicated 727 freighter service (sub. 17, p. 4).

6.5.2 Competition from third country carriers

The quantity and variety of fifth freedom rights from Australia have been influenced more by the requirements of passenger services than freight services. This may disadvantage freight operations because their traffic patterns are unlikely to mirror passenger routes. The consequences of low value outbound freight and restrictions on fifth freedoms mean that some freighters traverse quite lengthy stages, such as Sydney to Singapore, with an empty hold, or without using the freight capacity of passenger services most effectively. If one leg of a journey cannot be profitably operated, there will be upwards pressure on the prices of other legs.

Australian international airlines operate very few dedicated freighters, hence Australian users are more highly dependent on foreign carriers than is the case in the corresponding passenger market. This means that freedoms which allow overseas carriers to pick up freight in Australia are particularly important. Some participants emphasised the need for more fifth freedom rights for passenger and dedicated freight services. Tassal Limited (sub. 16) stated that some overseas dedicated freight carriers operating the loop Los Angeles–Sydney–Hong Kong–Taipei–Los Angeles have no cargo carrying rights ex-Australia. FedEx was critical of various restrictions in Australia's ASAs, such as the conditions attached to the use of fifth freedoms and the absence of seventh freedoms out of Australia, which it claimed limited its flexibility to operate freight services into and out of Australia (sub. 18).

However, even where rights exist, the commercial incentive may be insufficient to warrant supplying a dedicated freighter service. The Jet Fresh report argued that the apparent lack of motivation of some foreign dedicated freight carriers which do have such rights to carry freight ex-Australia may be overcome if Australian exporters could provide regular high yielding loads on these routes (HRSC 1996).

6.5.3 Cabotage and interconnection issues

Australia's ASAs restrict the rights of overseas carriers to carry freight within the Australian domestic market, as they do the carriage of passengers.

Competition within the domestic market is therefore restricted to the rivalry between Ansett and Qantas, some relatively small specialist operators, and the alternatives of surface or sea transport. DTRD indicated that administrative arrangements allow temporary exemptions from freight cabotage restrictions. Domestic cabotage by international carriers is permitted, for example, when carriers are unable to operate because equipment has failed, or because specialist equipment necessary to transport freight is not available in Australia (transcript, p. 323).

The Northern Territory Government (sub. 40) advocated the relaxation of restrictions on freight and passenger cabotage to allow carriage of air freight on some domestic sectors of international flights. It suggested that the granting of cabotage rights would enable foreign airlines to use available freight capacity between Darwin and other Australian destinations better.

Some participants suggested that granting rights for freight cabotage services could jeopardise the viability of some domestic freight services, or that it would decrease the returns airlines achieve on their domestic passenger services. The AIPA argued that if international carriers flew a domestic leg on route to an international destination they might make the round trip currently operated by some domestic freight operators unprofitable (sub. 61, pp. 4–5). This could lead to the domestic operator leaving the market altogether, and a poorer standard of service from the international operator who would be disinterested in operating the return trip. Similarly, Qantas argued that its Perth–east coast freight run, which is operated with a leased freighter, would be in jeopardy if freight cabotage services were allowed (sub. 67).

These arguments are similar to those put forward by some participants for the retention of cabotage restrictions on passenger services. It is inevitable that some changes would result from the entry of foreign carriers into the Australian domestic market for passengers or freight, but the dynamics of the market place make it difficult to tell in advance what the results might be. In addition, the possible loss of exemptions on excise taxes on fuel and other charges, which are currently extended to foreign carriers for the operation of international flights, may lessen the appeal of exercising cabotage rights (Section 6.2.3). To the extent that granting consecutive cabotage rights to foreign carriers for freight injects any competitive pressure on routes, it would be unlikely to lead to substantial losses in the market shares of dedicated domestic operators.

Some participants also raised some important logistical issues concerning the availability of air freight. The South Australian Government (sub. 3) emphasised that domestic flights from Adelaide to other gateways provide a less appropriate alternative to direct flights for freight than for passengers. This is because domestic flights operating between Adelaide and the primary freight

gateways of Sydney and Melbourne are all operated with narrow-bodied aircraft, such as Boeing 737s and Airbus 320s, which are unable to carry freight containers suitable for larger, wide bodied aircraft.

Indirect routes and the associated transshipping requirements (such as repackaging) can affect adversely the quality of perishable products before they leave Australia. The South Australian Government stated that:

Transshipment via other gateways imposes costs of the deterioration in market value of some products caused by additional transport time required to reach the markets. Transport SA, in consultation with industry, undertook case studies in 1995 of representative products exported from South Australia. The studies estimated that the cost per day of additional transport time is in the order of 25 per cent of FOB value for melons, 30 per cent for cherries, 15–30 per cent for fresh meat and 15 per cent for fresh chilled tuna (sub. 3, p. 8).

Airlines concentrate the majority of passenger flights through eastern seaboard gateways because these gateways have the strongest passenger demand and are the major destinations for inbound freight. Airlines have little incentive to divert what are essentially passenger flights to collect freight at smaller Australian gateways, especially for low-value cargo which attracts low freight rates. Nevertheless, even if wide-bodied aircraft flew through Adelaide, it would not necessarily avoid repackaging because different wide-bodied aircraft, such as the Boeing 767 and the Boeing 747, have different freight container sizes.

6.5.4 Conclusions

Little can be done about the basic imbalance in the value and volume of inbound and outbound air cargo, but the Commission considers that the financial penalties of the regulatory system could be reduced through further liberalisation.

In particular, granting freight cabotage rights to foreign freighters and passenger services would provide opportunities for them to carry domestic Australian air cargo on domestic stages of their journey — for example, from Sydney to Perth en route to Singapore. This could improve yields on those flights, and stimulate competition in the domestic market. Such services would have to compete not only with domestic air cargo services but also with surface transport. Nevertheless, the greater regular availability of freight capacity on wide-bodied aircraft could provide a useful additional type of service. However, care would need to be taken that international operators were not given an unfair advantage over domestic operators through exemptions on taxes and charges granted to international flights under all ASAs.

Regulations governing international freight services have been eased considerably in many of Australia's ASAs, but some restrictions remain. These increase the costs and inconvenience of doing business in Australia. Removing the remaining restrictions on the entry of third country carriers would provide some competitive pressures on freight rates for international and domestic routes. More fifth and seventh freedoms for Australian airlines would be of benefit too. In fact anything that reduces airline costs and improves networking possibilities will benefit users of air freight.

Options for liberalising air freight regulation are canvassed in Chapter 9.

6.6 Regional effects

Air services are not an end in themselves, rather they are a way of getting people and goods to locations for business or leisure activities. Many international airlines supply services to Australia's main international airports, and these are complemented by domestic services to a wide range of secondary airports. Connections with international services are therefore not always direct, and in some cases may require connections on regional or domestic airlines.

Many participants emphasised the critical role which air services can play in state and regional development, and tourism in Australia. For example, the South Australian Government argued that:

... [Direct international flights] provide benefits related to increased passenger spend[ing] at Adelaide Airport, export facilitation, investment attraction, niche tourism development and enhanced credibility of the State as an international destination and place to do business (sub. 3, p. 3).

Tourism is highly significant for some regional economies. The Cairns Port Authority noted that:

International inbound tourism has pumped \$4 billion into the economy of Tropical North Queensland over the past five years — and tourism is now the largest industry sector in the region (sub. 51, p. 1).

Constraints imposed by ASAs on overall capacity and market access affect foreign airline services to smaller cities and regional airports. Many of these cities are served currently by Australian airlines, either through direct international flights or through connections on their domestic services. Ansett noted that:

... ASAs do not constrain Australian carriers from serving Australian regions ... Normally ... [Australian] ... carriers, in exercising commercial judgments, prefer to serve main centres, and rely on domestic networks to supply the feed to and from regions (sub. 19, p. 35).

However, the constraints on foreign airlines limit their potential to offer new services and to compete with the Australian carriers directly in servicing some cities. Restrictions on city designation can limit access to secondary airports in two ways. First, some ASAs exclude access to secondary airports either specifically or because all allowed points in an agreement are fully used. Second, combined with overall capacity restrictions, limits on foreign carrier access points impose opportunity costs on flying to points other than primary international gateways.

The South Australian Government argued that:

... as long as the capacity available to a foreign carrier is less than the amount of total capacity it wishes to operate to Australia, then the effect of that will be to concentrate the airline's services on the highest yielding airports. Scarcity of capacity will act to discourage airlines either from implementing new services to secondary airports, or expanding existing services to them (sub. 3, p. 10).

Participants suggested several approaches to improving access to secondary gateways, with potential flow-on benefits for regional Australia.

The South Australian Government (sub. 3) suggested removing or reducing limits on capacity generally as a way of lowering the opportunity cost of using secondary gateways. Alternatively, where overall capacity limits are binding, the governments of Queensland, Northern Territory and Western Australia argued that access to secondary gateways should be more substantially liberalised than at primary international gateways. These governments felt that this approach would encourage regional development by increasing opportunities for foreign airlines to use secondary gateways, in turn increasing inbound tourism (particularly in the regions).

Some participants wanted to remove any restrictions on access to airports in northern Australia — that is, that airlines be given unlimited capacity to serve specified airports in the northern zone — as a step towards more broadly based reform, and a boost to tourism. The Northern Territory Government suggested a northern Australian 'open skies' policy which would include better access to airports in these regions as a first step to more liberal arrangements:

The 'Northern Australia' proposal for Air Service Agreement negotiations encourages regional development by increasing opportunities to utilise selected northern secondary gateways to increase inbound tourism to Australia. The concept may be used by the Commonwealth as an early initiative, on a selective basis, to increase the liberalisation process. Over time there will be increasing global and regional pressures for open route and open capacity arrangements (sub. 40, p. 4).

The Queensland and Western Australia Governments submitted similar proposals. The Queensland proposal also suggested that some cabotage rights be

offered to foreign airlines to carry passengers from the designated northern airports to other major airports outside the Northern Australian zone. However, this approach would run into problems if an airline sought the right to use a port in the 'northern zone', then fly on to a second port which is designated and allocated capacity under an ASA. More generally, lifting restrictions on capacity and gateway specification would be preferable.

The cities currently designated in ASAs are the product of negotiations within the bilateral framework and reflect the broad exchange of opportunities between Australia and its bilateral partners. DIST argued that:

Regional centres have ... suffered from the general tendency in the past for each of our agreements to provide access to a limited number of specific ports in Australia. The availability of points is frequently used as a negotiating chip. In this sense, the benefits regional Australia would receive from a more liberal and flexible regime are often seen as a secondary consideration (sub. 31, p. 15).

As Australia has relatively few beyond points it can offer to airlines of other countries, Australia's multiple points of market access are of some value in bilateral negotiations. Access to Sydney was an important issue for many participants, and is highly valued by the airlines of many countries. Similarly, Melbourne, Brisbane and Perth are major and expanding gateways (Table C5, Appendix C), and may have considerable value at the negotiating table. However, the value of many other locations as negotiating coin is questionable. Denying other countries the rights to serve locations such as Adelaide, Darwin and Broome may be counterproductive. If capacity is scarce, and airlines have to choose between serving Sydney or Darwin, for example, they will choose Sydney.

The proposals put by the Northern Territory, Western Australia, South Australia and Queensland have some parallels in a recent policy initiative announced by the Hon. Glenda Jackson MP, Minister for Aviation for the United Kingdom. The UK Government has announced its intentions to offer its bilateral partners open access to all UK airports — with the exception of Heathrow and Gatwick — on the condition that UK airlines are also able to operate on the same routes.

The change in our policy will allow both UK airlines and the airlines of the country concerned to operate to and from that country on such routes without restrictions on capacity or frequency, and without the need for international aviation negotiations to establish such services. This will enable UK and foreign airlines to plan the development of services with confidence that future growth will not be limited by bilateral restrictions. (Jackson 1998)

An important feature of the UK initiative is that it is within the bilateral framework: UK airlines obtain unlimited access to the bilateral partner's departure points, in exchange for unlimited access by the bilateral partner's

airlines to UK airports other than Gatwick and Heathrow. This places pressure on the bilateral partners either to liberalise access points and capacity completely, or take a parallel course and distinguish between primary and secondary gateways. Whichever option is chosen, reciprocity is route specific. These options are considered in Chapter 9.

6.7 Economy wide effects

It is difficult to trace the net effects on economic welfare of the complex restrictions on trade and competition in the bilateral arrangements for international air services. The economic effects not only concern those directly involved in international aviation, but also other economic activities that are directly and indirectly affected. Further, with an industry that is international in nature, the analysis needs to consider the effects on other countries as well as Australia.

6.7.1 Effects on the Australian economy

The previous sections have shown that constraints in Australia's ASAs have led to higher airline costs and prices, and restricted competition and the quantity and range of services provided to passengers. The effects have impeded the Australian tourism industry (particularly in regions served by secondary gateways), and have implications for the many small businesses dependent on tourism.

The air freight market appears to be less affected by restrictive provisions in ASAs. The main impediment to better service provision seems to be the imbalance in the value and quantity of Australia's air freighted imports and exports, rather than constraints in the ASAs.

The Commission has received relatively little explicit information about the effects of the current ASA constraints on airline costs. However, some information is available about the cost savings achieved by Australia's airlines as a result of past reforms. The industry's efficiency was considerably hindered by the regulatory system imposed for many years, particularly the segmentation of domestic and international services, the 'two airline' policy, and government ownership which often emphasised non-commercial objectives. Significant efficiency gains have been achieved since the removal of these impediments.

Qantas stated that:

Between the financial years 1993-94 and 1996-97, Qantas' annual revenue collection rose from \$6.6 billion to \$7.8 billion, an increase of 18.2 per cent. At the

same time, costs rose by 15.9 per cent from \$6.3 billion to \$7.3 billion. The Qantas Group's passenger growth in the four year period has been 36 per cent including a 13.0 per cent rise in passenger traffic carried on international scheduled services. Revenue Passenger Kilometres (RPKs) have increased by 26.3 per cent, while capacity growth measured in Available Seat Kilometres (ASKs) has been less at 25.3 per cent (sub. 25, p. 10).

Nevertheless, the constraints on capital raising, traffic and access rights and network development have considerable cost-raising effects for airlines serving the Australian market. These translate into higher fares and reduced levels of service for Australian consumers, without significant benefits to others.

The constraints on competition tend to support higher profitability for the airlines as well as higher prices. Other things being equal, receipt of higher profits by Australian owned airlines as a result of foreigners paying higher prices improves Australian economic welfare, just as increased foreign airline profitability as a result of Australian passengers paying higher prices reduces it. Both Qantas and Ansett have argued that Australia is better off to the extent that foreign passengers pay more. Ansett stated that:

As with other export industries, it is in Australia's interests to have high prices; to this end, liberalisation may be against its interest. There are some qualifications to this; for example, there are Australian travellers even on routes dominated by visitors, and Australian airlines do not gain all of the traffic on these routes. However, in general, there is an argument that Australia's interests are best served by a less liberal environment and higher fares and profits (sub. 19, p. 53).

Differences between markets have raised some interest in the idea of pricing air services above competitive levels on some routes. This is a variation of the optimal tariff (trade tax) theory that suggests that if foreign demand for the goods or services of a country is sufficiently price inelastic, national welfare can be increased by taxing exports. In the aviation case, if foreign demand is sufficiently inelastic, and traffic is dominated by inbound passengers, charging high prices might be in Australia's national interest. This could be achieved by restricting competition so that incumbent airlines are able to maintain high prices in which case the rents are retained by the airlines or their employees, or through taxes on airfares, in which case the rents are retained by the Government. Different taxes (or permissible price raising by the airlines) would apply to different markets.

This idea has a number of serious practical difficulties. First, like any optimal tariff or export tax argument, such an approach would invite retaliation from other countries and could trigger serious disputes about trade in other goods and services. Second, the data do not exist to determine elasticities of demand for different markets with anything like the certainty required (Chapter 2). Elasticity estimates do not clearly distinguish between the effects of changing

fares on one route only with others held constant, and the effects of changing all fares. Nor do they distinguish between short term elasticities and the almost invariably higher long term elasticities. Further, demand may be inelastic for some markets, but this could disguise relatively price sensitive behaviour by some groups of travellers (for example, tourists) and price insensitive behaviour by others (for example, business). Third, setting higher fares on some routes will inevitably capture some domestic expenditure by Australian passengers. Fourth, setting different taxes on different routes (rather than higher prices) may contravene the Chicago Convention's non discriminatory approach to setting of airport and other charges (ICAO 1997, Article 15)

This argument also takes a narrow view of the national interest. If tourists have to pay higher prices for airfares, then they have less to spend on other goods and services while in Australia. Qantas suggested that this is not a cost to the extent that it reduces the profits of foreign-owned hotels, but the same argument applies to foreign ownership of Australian carriers. The Commission notes that the proportion of foreign ownership of tourist accommodation in Australia is about the same as foreign ownership of Australia's international airlines (JLW 1998).

DIST argued that:

Australia's approach to air service negotiations does not appear to take sufficient account of the potentially substantial benefits that would flow to Australia from the introduction of more frequent, more competitively priced services. A true net national benefits approach to the negotiations would recognise these wider net benefits of liberalisation (sub. 21, p. 21).

The Commission's modelling of the effects of the entry of Ansett International (Appendix F) on a number of Asian routes indicates that on most routes affected, lower airfares arising from greater competition increase consumer welfare but reduce airline profits. The model measures economic welfare effects by changes in consumer surplus and airline profits for both domestic and foreign markets. It found that reduced prices and improved services as a result of Ansett International's entry increase consumer surplus across all international routes considered and increase net economic welfare in Australia and all affected overseas markets (Table 6.3).

The Commission's modelling builds on preliminary work by Street, Smith and Savage (1994) which examined the welfare trade-offs between Australia and the global community, and among Australian air travel consumers, airlines and tourism operators from liberalising ASAs. Results from the Street, Smith and Savage study suggest that the overall welfare effects of liberalising ASAs are ambiguous.

Citing these results, Qantas (sub. 25) and the Centre of International Economics argued that the overall effect of increasing competition on Australian consumers is clearly positive, but the effects on other important groups (such as Australian airlines and the tourism industry) are unclear. However, the Commission notes that the Street, Smith and Savage model is based on a hypothetical market with assumed price and quantity responses by airlines. Results from the Commission's own model, which uses actual market characteristics and endogenises airline behaviour, suggest that increased competition leads to net welfare gains. In addition, the Commission's modelling tests for sensitivity to the price elasticity of demand. This test was undertaken to address concerns about the accuracy of elasticity estimates for individual markets, and industry statements that demand was generally price elastic. Increasing the price elasticity did not change the general tenor of the results, that increased competition enhances economic welfare.

Table 6.3 **Estimates of Australian and foreign economic welfare changes for Ansett International's entry, 1995 and 1997**

	1995	1997
<i>Australian consumer welfare by route</i>	\$m	\$m
Australia and:		
China	5.5	7.6
Hong Kong	24.2	23.3
Indonesia	36.3	44.6
Japan	3.5	4.6
Korea, Republic of ^a	0.0	1.3
Malaysia	0.5	7.1
Taiwan	0.0	1.4
Total consumer surplus	70.0	89.9
<i>Australian airline profits (gross)</i>	-41.6	-57.5
Australian economic welfare	28.4	32.4
<i>Foreign consumer welfare by route</i>		
Australia and:		
China	3.5	5.4
Hong Kong	16.8	19.5
Indonesia	0.2	10.4
Japan	65.2	79.2
Korea, Republic of ^a	-0.6	11.6
Malaysia	0.9	9.0
Taiwan	2.3	18.4
Total consumer surplus	88.3	153.5
<i>Foreign airline profits (gross)</i>	-75.9	-121.8
Foreign economic welfare	12.4	31.7

^a Ansett had minimal market share for services to the Republic of Korea in 1995 and was excluded from the model for that year.

Source: Commission estimates.

6.7.2 Effects on the world economy

It is accepted by international trade economists that trade barriers generally reduce efficiency in the global allocation of resources and lead to lower living

standards around the world. Liberalisation of trade in goods and services has been a major factor in world economic growth over the past half century. The question is whether the barriers to trade in international air services have had a negative effect on the global economy.

The Commission has not found anything unique about production and trade in air services that would indicate that restrictions on trade in international air services do not have harmful effects on countries generally. This chapter has outlined the substantial costs to airlines and their customers of constraints on activity and competition within the bilateral system. The gains that have occurred with liberalisation and deregulation in both international and domestic aviation markets are well documented.

The restrictions in the system appear to lead to a serious misallocation of resources within individual economies. Some countries, by preventing international trade in air services on the basis of national comparative advantage, are supporting international airlines when there would be better uses for their national resources. Conversely, those countries that have a comparative advantage in providing international air services cannot reach their potential because capacity, network development, national designation and ownership and control are restricted.

The system also reduces the efficiency with which resources are used in the aviation industry. Costs are higher and productivity is lower than in the absence of many of the regulatory constraints on airline operations.

The requirement for local ownership and effective control for national designation has had a particularly distorting effect on the capital market. The need to raise equity capital domestically imposes an opportunity cost on other industries' access to capital, particularly in countries with limited capital markets. In such economies, the high capital requirements of modern international airlines can increase the cost of capital for other industries, as well the airline industry. Removing this constraint would free capital for use in an economy's most productive areas. It would also give airlines the flexibility in choosing between equity and debt financing that other industries take for granted.

The constraints on airline operations and competition have also tended to reduce the technical efficiency of the international airline industry. Constraints on capacity, frequency of flights, networks and even aircraft choice and use, mean that costs are higher than if the airlines could make their own production decisions, as can producers in almost any other industry. The Commission has been unable to identify any area of compensating cost saving from these constraints.

The restrictions appear to have had a mixed effect on airline profits. The restrictions on competition tend to improve yields and profits, other things being equal. The Commission's modelling of the effects of Ansett International's entry to seven Asian routes shows that the resulting lower prices contribute to a significant decline in profits for the carriers in all of the foreign economies concerned — a fall of almost \$122 million in 1997. There is little doubt that the anticompetitive constraints that have evolved in the bilateral system can bolster profitability of the airlines, which explains why the airline industry supports the assistance it receives from the system, despite the costs.

This potential profitability is not always realised in higher than average earnings for airlines. Worldwide profitability of international airlines has been low on average relative to other industries, although some airlines have been highly profitable and others have sustained substantial losses over many years. Some airlines have dissipated their potential monopoly profits through inefficiency or the pursuit of non-commercial objectives. To the extent that these anticompetitive constraints have allowed airlines to adopt this behaviour, they further contribute to inefficiency in the world airline industry.

Overall, by increasing costs and reducing competition, the system tends to produce prices that are higher than necessary and restrict the quantities of services produced and consumed. It reduces the incentive for airlines to develop new and innovative products, constraining the growth of international tourism.

The Commission's modelling of the effects of entry of even a relatively small airline to international routes shows how consumers can benefit from the lower prices and better quality of service that results from greater competition. The entry of Ansett International increased consumer surplus in the seven Asian economies served by nearly \$154 million in 1997, more than compensating for the decline in profits of the airlines (Table 6.3).

This partial equilibrium modelling does not include any effects on other industries. It is reasonable to expect that the modelled consumer benefits would be mirrored by benefits to the tourism industry and to other industries whose staff travel on business or use freight services. However, the reduced profitability of the airlines could be expected to have short term adverse effects on airline shareholders' incomes, consumption and wealth. It could also be expected to stimulate efforts by the airlines to improve efficiency, given that competition provides a most effective discipline on company behaviour.

Liberalisation of trade in international air services is likely to bring substantial benefits to consumers, the tourism and other industries that rely on international aviation. It is also likely to benefit efficient airlines. Those countries with efficient airline industries would reallocate more resources to the airline

industry and away from those industries that are relatively less efficient. Conversely, those countries with relatively inefficient airlines, would move resources out of airlines and into activities to which they were better suited, leading to economic gain in the long term.

7 CAPACITY ALLOCATION AND THE IASC

The capacity available for Australian airlines under the bilateral system is allocated by the International Air Services Commission (IASC). The Productivity Commission is required to assess whether the IASC allocation process (including the provision designed to assist new entrants) provides net benefits to Australia.

This chapter examines the policy of multiple designation and the net benefit of the IASC allocation process. It discusses alternative approaches to allocation and the current policies for capacity allocation. It also examines the relationship between the IASC and the Australian Competition and Consumer Commission (ACCC).

7.1 Multiple designation in Australia

During the late 1970s many countries began to include the multiple designation of airlines in their air service arrangements (ASAs). This allowed a country to grant the right to carry international traffic to more than one carrier on a particular route. Previously, most agreements had a single designated carrier for each country (Dresner and Tretheway 1992a).

Multiple designation was introduced in Australia in 1992, before which Qantas was the country's only international airline. Multiple designation is now contained in all Australian ASAs except for those with Greece and India which have dual designation, and those with Burma, the Cook Islands, Italy, Mauritius, Nauru, Switzerland and Zimbabwe which have single designation. Only two of these single designation routes (Italy and Zimbabwe) are served by an Australian carrier.

Multiple designation has partly removed artificial constraints on the emergence of new international airlines in many countries, thus promoting greater competition in international air services and facilitating overall efficiency improvements. The Department of Transport and Regional Development (DTRD) noted that:

... multiple designation has allowed the entry by new Australian (and foreign) carriers in a significant number of key growth markets ... The threat of entry is a valid means of ensuring that consumers are not exploited on any route, and as such our aim is to have shelf capacity and multiple designation available on all routes (sub. 33, p. 22).

Multiple designation under the bilateral system has required governments to introduce a method for allocating capacity to carriers on particular routes. The IASC was established on 1 July 1992 to provide an independent body for allocating third and fourth freedom capacity including codesharing (Box 7.1), to existing and prospective Australian carriers. Given the growth in international airline alliances since the late 1980s, applications to the IASC for capacity are increasingly based on codesharing. During 1997, for example, codesharing was approved by the IASC on 11 routes. In most of these cases, the application was unopposed and capacity was available.

Box 7.1 Codesharing

Many ASAs now contain provisions for the operation of joint services, particularly codesharing arrangements. Codesharing occurs when an airline uses seats on another airlines' aircraft, but employs its own airline designator code (for example, 'QF' for Qantas) and capacity rights.

There are two main forms of codesharing: the sale of seats by the operating carrier to the non-operating carrier; and the swapping of seats between carriers without any further payment. Codesharing may create public benefits, particularly on low traffic routes, but it also may have anticompetitive effects on some routes by reducing incentives to compete vigorously and by reducing consumer choice of airlines.

Source: Australian Competition and Consumer Commission (sub. 49).

The IASC allocates capacity to Australian carriers only, for both scheduled passenger and freight services, and for all services available under Australia's ASAs. Until recently this only included third and fourth freedom rights. In July 1998 the IASC Act was amended to expand the IASC's jurisdiction to all rights available under Australia's ASAs, including fifth freedom services. It is not involved in the approval of charter operations.

An independent statutory body, the IASC consists of a part-time chairperson and two part-time commissioners. DTRD provides secretariat support staff.

The IASC allocation of capacity must have regard to the public benefit objectives set out in the *International Air Services Commission Act 1992* (Box 7.2), which also sets out the public processes to be followed by the IASC in making allocations. Policy statements by the Minister for Transport and Regional Development (Section 7.5) provide the criteria to be used for allocating capacity.

Box 7.2 Objectives of the IASC

... to enhance international air services by fostering:

- a) greater economic efficiency in the airline industry, and increased competition between Australian carriers;
- b) increased responsiveness by airlines to the needs of consumers, including an increased range of choices and benefits;
- c) Australian tourism and trade; and
- d) the maintenance of Australian carriers capable of competing effectively with airlines of foreign countries.

Source: International Air Services Commission Act 1992.

The IASC must follow a public process under the Act in making determinations regarding the allocation of capacity. The IASC must advertise new capacity (as it becomes available) and publicly invite applications and submissions. It may hold public hearings in making a determination, and must publish determinations.

The Act allows the Minister to make policy statements on how the IASC should perform its functions. These policy statements may set out the criteria for assessing the benefit to the public of capacity allocations, including criteria that apply in particular circumstances.

When an application is contested other criteria are used to adjudicate between applicants. Where there was previously one carrier on a route, start-up provisions apply which favour a new entrant to that route. The IASC also reviews allocated capacity on the use-it-or-lose-it principle, and undertakes a renewal process when determinations expire after their five year term.

The most recent version of the policy statement was released on 23 April 1997, superseding earlier statements released on 27 March 1995, 7 December 1992 and 1 July 1992. These revised policy statements introduced several changes, adapting the policy statement to the changing policy environment, and clarifying some aspects of the statement.

The IASC made nearly 200 determinations and decisions between July 1992 and August 1998 (of which 85 related to Australian airlines other than Qantas).

7.2 Has multiple designation and the IASC provided a net benefit?

The Commission has been asked to assess whether the IASC allocation process provides net benefits to Australia, particularly referring to the value of provisions designed to favour new entrants (Section 7.8).

The introduction of multiple designation has been an important component of the liberalisation of international air services which has occurred since the mid 1980s. Multiple designation provides the *potential* for greater competition on routes to and from Australia. The ACCC stated:

Multiple designation facilitates entry to the market and may lead to increased competition as more airlines operate services. By comparison, a single designation agreement has at most two airlines (one Australian, one foreign) operating in the market and creates the potential for duopolistic pricing and scheduling (sub. 49, p. 5).

Realising the potential gains requires an allocation process that effectively allows new entrants while minimising costs for both governments and carriers. The Commonwealth Government's approach has been to use an administrative system that bases allocation on a public interest test, with certain provisions for favouring new entrants.

A number of new carriers have attempted to enter the market since the introduction of multiple designation. From 1 July 1992 to 31 August 1998, 14 applicants (besides Qantas) applied for capacity and received at least a draft IASC determination (that is, a preliminary decision regarding an application for capacity):

- three carriers were allocated capacity and commenced operations on those routes (Ansett, National Jet Systems, and Asian Express);
- four carriers were allocated capacity (conditionally in some cases), but have yet to commence operations (Flight West, Transair, Qwestair and Australia World Airways). Flight West, Transair, Qwestair were initially unable to commence operations as approval was not given by the Papua New Guinea Government. That approval has now been given and all three should have commenced operations by October 1998;
- two carriers were allocated capacity but did not start operations, or have subsequently ceased operations (Australia Air and National Airlines); and
- five carriers were found to be not reasonably capable of implementing their proposals so were not allocated capacity (sub. 42).

Thus, despite the activity of several potential start-up airlines, only two passenger operators and one freight operator have entered the market. Ansett

International has operated between Australia and Denpasar (Bali), Hong Kong, Kuala Lumpur, Osaka, Taipei, Jakarta, Seoul and Shanghai (although services have now been withdrawn from Kuala Lumpur, Jakarta, and Seoul). National Jet Systems has operated regional international flights to Singapore and Indonesia, while Asian Express has freight services to New Zealand.

The entry of new airlines has increased competition on a number of routes (Chapter 6). The importance of new capacity in improving competition has been backed by participants. The ACCC stated:

While multiple designation is highly desirable from a competition viewpoint, it needs to be accompanied by sufficient capacity entitlements if it is to yield competition benefits. To have multiple designation without sufficient capacity for each carrier to develop commercially sustainable services would be likely to result in fewer carriers operating than if capacity is unlimited (sub. 49, p. 5).

However, Ansett has noted:

The IASC has not been able to promote competition to any great extent but this is because of the nature of its task, one of allocating limited capacity, rather than because of its allocation approach (sub. 19, pp. 48–49).

While few new airlines have entered the market, the Commission's analysis suggests that entry brings significant economic benefits. The threat of the entry of new airlines on routes may also provide an additional avenue for competition induced benefits. The IASC process has been valuable in introducing this competition, but the importance of the expansion of capacity should not be ignored.

While the introduction of multiple designation and the allocation of capacity by the IASC have benefited Australia, improvements to the allocation system could increase benefits and reduce the costs.

7.3 Alternative allocation approaches

An administrative system (based on a public interest test approach) has been used in Australia to allocate capacity. Would an alternative approach produce greater net benefits? The Commission considered three approaches: rule based, public interest based, and market based.

7.3.1 Rule based allocation approach

This approach involves the use of a pre-determined formula for the allocation of capacity. Capacity could be allocated on a geographic basis, or shared between

carriers based on some specific rule, for example. Provisions could also be made for automatic entry rights under certain conditions.

The Republic of Korea uses a rule based allocation method. Korean Air and Asiana are the only two designated airlines. Capacity on new routes is allocated between the two carriers equally. The system differs for established routes. After Korean Air reaches a specific capacity level, Asiana gains access up to a certain proportion of Korean Air's capacity, then capacity is allocated equally (sub. 42).

Canada has used a geographic allocation system with Canadian Airlines flying routes to the west and Air Canada routes to the east. This system was liberalised following a review in 1994. However, the geographic separation largely remains. The two major carriers can only compete on routes which exceed 300 000 passengers per year (sub. 42).

Such approaches are simple to understand and apply, and they have low administration costs. Costs for carriers are low because they are not required to apply for capacity that is received automatically. Further, carriers can be certain about the allocation of future capacity.

However, there are some problems with this approach. First, a rule based approach cannot easily deal with changing market structures which may require changing allocations or the transfer of capacity between carriers. It may also prevent airlines from operating the optimal amount of capacity on a particular route.

Second, such an approach can encourage strategic behaviour. If increased traffic activates rules allowing entry by an additional carrier, for example, then an incumbent airline may not respond to demand for increased services on a route, or foster demand by trade promotion or lowering prices.

Finally, rules providing for geographic allocation to single airlines do not provide multiple designation on routes and have few if any competitive benefits.

7.3.2 Public interest test approach

This approach involves an adjudicative process using some form of public interest test, usually based on defined policies and criteria. This method is used in a number of countries as well as Australia, including the United States (Department of Transportation), and the United Kingdom (Civil Aviation Authority).

Such an approach can provide a number of benefits. It can be independent, transparent and flexible. It can also be used to pursue particular policy objectives, such as new entry on routes.

However, a public interest test approach imposes costs on both the government, in operating the process, and on carriers, in supplying information used in the adjudication process. It also may create delays in allocating capacity.

Further, an inevitable conflict occurs for such an approach between setting concrete rules and criteria, and exercising subjective judgment:

First, the regulator's desire to find objective standards to select the winner from the final group often conflicts with his belief that he must exercise his subjective judgment, for no set of standards can consistently select winners who are best in terms of the regulatory program's objectives.

The second difficulty is the conflict between the need for decisions that comply with certain legal principles of fairness and the effort to implement the statute's purposes. For example, the need to treat like cases alike — a basic principle of fairness in law — pushes the agency towards developing uniform rules and standards. Yet when deciding individual cases, agencies make exceptions or blur standards to better attain the statute's purpose (Breyer 1982, p. 74).

A public interest test may provide capacity to carriers where it is most likely to provide benefits to the country, but this is certainly not assured. A poorly designed or administered system can lead to a less than optimal allocation of capacity.

7.3.3 Market approach

A market approach would see capacity auctioned or otherwise sold to the highest bidder. Such a competitive market allocation system could provide the most efficient allocation of capacity, by allocating capacity to carriers that value it most.

A market approach could be based on the auctioning of all capacity entitlements or just new capacity entitlements. Both existing and new capacity could be transferable. As far as the Commission knows, such a system is not used in any country.

A market-based allocation system would allow airlines to make their own commercial judgments about the routes on which they wish to operate. It also avoids many of the costs of an adjudicative process.

Selling rights in a competitive market could also provide carriers with more flexibility through the operation of a secondary market, in which carriers would trade capacity directly among themselves. This could allow carriers to adjust

quickly to market conditions. Such a system could be transparent, both in the initial auction process and for subsequent sales. It could also provide clear signals of where capacity increases are required.

However, while a market-based system has benefits, where there are capacity constraints, it has drawbacks too. If capacity is constrained, monopoly rents can be extracted from particular routes. A market-based approach would allow governments to gain a portion of these rents when capacity is sold.

This could lead to incentives for governments to restrict capacity on some routes. Current government policy is to increase capacity and thus to reduce the scope for monopoly rent to be earned.

There is also the potential for restrictions on capacity to create further obstacles to liberalisation of international air services in the future. In the taxi market, for example, the high value of taxi licences due to an artificial restriction on the number of licences has proved to be an impediment to further reform. This vested interest problem could be ameliorated by limiting the time period for which the route allocations are made, although they would have to be long enough to encourage investment in route development.

If firms pay for privileges issued by government, then legal property right issues may arise. The payment for capacity may give airlines additional legal claims over those capacity rights. Thus, changes in capacity which arise from factors outside of the control of aviation authorities (for example, political changes) may lead to claims for compensation.

These problems have occurred to various degrees in several Australian agricultural product markets, such as the egg and dairy markets where output restrictions have created strong vested interests opposed to reform, and fisheries where licensing has created property rights problems. However, these problems have generally not outweighed the benefits of a market-based allocation system.

However, with capacity constraints resulting from the bilateral system, multiple designation is unlikely to involve more than two Australian carriers on a route. This could cause additional problems with a market-based approach. Ansett argued:

The main problem with auctions in this context is that there are not sufficient likely bidders to make auctions efficient. For most routes there will only be one or two effective bidders. In small group auctions, where economies of scale are present, auctions can be used pre-emptively by a dominant incumbent to prevent the emergence of competitors (sub. 19, p. 49).

Thus an auction process (compared to a purely administrative system) could increase barriers to entry for new carriers and reduce competition. If an

incumbent airline could earn monopoly profits by retaining all the Australian capacity on a route, then it may be able to make a higher bid for new capacity than that of a new entrant, (who could only base its bid on the profits available from a more competitive market). The costs associated with operating a auction system would not make it significantly cheaper to operate than an administrative system.

7.3.4 The Commission's preferred approach

The best way to achieve efficiency and to improve the economic welfare of Australians from air services would be to remove all capacity constraints, as indicated in previous chapters. A method of allocating capacity that is constrained by government actions is a choice among inferior options.

Given the objective of increasing competition in the international air services market, a rule-based allocation approach is inappropriate because it does not allow the flexibility required to stimulate competition (and may even hinder it). An auction could provide efficiency gains in a competitive market, but competition is seriously limited in the bilateral regulatory system. Thus an auction system would have limited influence on the efficiency with which resources are used in the airline industry or in the economy. Further, given the constraints of the bilateral system and the small Australian market, an auction system could hamper competition.

If capacity remains constrained, the Commission concludes that the public benefit test approach is most appropriate and the IASC allocation system should continue (however issues regarding the operation of the IASC would need to be addressed). If capacity constraints are removed, the IASC allocation process would no longer be required.

Recommendation 7.1

Contested capacity should continue to be allocated by the IASC using a public benefit test.

7.4 The International Air Services Commission Act

The Commission considered some aspects of the objectives and operation of the International Air Services Commission Act which affect the IASC.

7.4.1 Objectives of the IASC

A principle of good regulation is that it should have clearly defined and enunciated objectives which do not overlap or conflict. The stated objectives of the IASC are generally clear, but there is some conflict and confusion (Box 7.2).

As noted in Section 7.3.2, an administrative allocation process must deal with the inherent conflict between developing a list of concrete rules and setting overarching principles and exercising subjective judgment. The Commission believes that the range of objectives currently specified in the IASC Act may introduce conflict and increase the complexity of the IASC's task.

The main objective of the IASC, as set out in the Act is to 'enhance international air services'. The fostering of efficiency and competition (point 'a' of the objectives) is likely to enhance international air services as is the responsiveness to consumer needs (point 'b'). But enhanced international air services are likely to foster tourism and trade, rather than the other way round (as stated in point 'c'). And, to the extent that positive, distinct action is taken to comply with point 'd', 'the maintenance of Australian carriers capable of competing effectively with airlines of foreign countries', it can conflict with point 'a', 'greater economic efficiency in the airline industry, and increased competition between Australian carriers'.

It is of benefit to Australia to ensure that international air services to and from Australia are as efficient and competitive as possible. This will ensure that the best possible services are provided at the lowest possible cost to both Australians and foreign travellers. This benefits not only those Australians who travel overseas but also the many industries relying on air services, such as tourism and airport services.

Despite the need for interpretation, the task of the IASC would be simplified if the objective of the IASC was reduced to a simple, clear statement of its task. However, when objectives or guidelines are simplified there is the potential for them to be misinterpreted. DTRD noted this, stating that simplifying the objectives of the IASC:

... is unlikely to simplify the task of the IASC. Ansett provides a good illustrative example. Ansett could be claimed to be a less 'efficient' carrier than Qantas, incurring losses and without the benefits of economies of scale or scope. However ... it is demonstrably an agent of competition. The conflict created can be addressed in guidelines or policy statements. In the Department's view, this matter is not prone to simple change (sub. 60, p. 15).

Nevertheless, with a simple overarching objective of promoting greater competition and economic efficiency, the IASC should be able to resolve this

issue. While initially the new entrant may be less efficient, the introduction of competition on the route should lead to greater long term efficiency gains for the community, as the airlines battle to reduce cost and improve services to attract consumers.

Recommendation 7.2

The objectives of the *International Air Services Commission Act 1992* should be amended to:

‘enhance the welfare of Australians by promoting economic efficiency through competition in the provision of international air services’.

7.4.2 General approach of the IASC

The Act provides for the IASC process to be conducted in a public and transparent manner. The IASC explained that:

There is a high degree of transparency in the IASC process. The new capacity arising from bilateral negotiations is advertised publicly and applications invited. All applications are made available for public inspection, together with any objections or comments that may be made by interested parties. Material such as business plans may be submitted by applicants on a confidential basis, provided that such material is referred to in the public register version of the application. In certain circumstances, draft determinations or decisions are issued to give interested parties a further opportunity to comment before moving to finals. Full assessments of the applications and the IASC’s reasons are included in all determinations and decisions (sub. 42, p. 6).

Generally, participants have expressed satisfaction with the perceived independence of the IASC and its processes. Ansett, for example, stated:

... the framework for the negotiation of bilateral rights by the Department of Transport and Regional Development (DTRD) and the allocation of those rights by the IASC has worked well. The negotiation process should continue to be separate from the allocation process and the allocation of rights should remain with a small independent statutory authority supported by its own secretariat.

... [the IASC] has acted in an independent, balanced and reasonable manner. Its processes are open and have given ample opportunity for both the applicant and other interested parties to comment on applications (sub. 19, pp. 5, 45).

Similarly, the Department of Industry, Science and Tourism (DIST) expressed satisfaction with the processes undertaken by IASC in allocating capacity, and noted the importance of ensuring that capacity allocations are made by an independent agency (sub. 31).

Australia World Airways commended the administration of the IASC in handling applications, noting that its applications for capacity were handled in a fair manner and that the IASC was open to consultation at all stages of the process (sub. 22; transcript, p. 4).

7.5 Policy statement of the Minister for Transport and Regional Development

The IASC allocates capacity on a route-by-route basis, with routes being country to country rather than point specific (although bilateral agreements may specify cities, and thus constrain airlines). The criteria for allocating capacity are set out in the policy statement of the Minister for Transport and Regional Development. Several criteria may be used for each allocation, depending on the particular circumstances. In addition to the general criteria that are used in most circumstances, various other criteria apply for specific circumstances (for example where a route is contested, where there is only one incumbent airline, and during renewals of determinations).

The policy statement itself is a complex document with various permutations of possible criteria. A representative of Melbourne Airport, for example, argued that:

... it took me three readings before I could work out exactly what it was all about. I am neither an unintelligent person nor unfamiliar with the subject matter that they were discussing ... if somebody was coming into this with a sales and marketing background from an airline to set up new services they would find it extremely difficult. I thought it was unduly complicated in the description and also the number of processes that have to be worked through (transcript, p. 58).

The changes proposed by the Commission (see below) would help simplify the policy statement, but the document should also be reviewed for clarity and ease of use.

7.6 General capacity allocation criteria

The IASC determines capacity where the allocation is of benefit to the public. Particularly, the allocation is not to be considered of benefit to the public unless the carrier is reasonably capable of obtaining the necessary approvals to operate on the route and of implementing its proposals. These general criteria and their conditions are shown in Box 7.3.

These general criteria have become the minimum standard — as the IASC has stated, ‘... [it] will allocate capacity to any Australian carrier that can

demonstrate that it is reasonably capable of obtaining the necessary approvals and of implementing its service proposals' (sub. 42, pp. 4–5).

These criteria are used in all cases except for routes in the 'start-up phase' (for which somewhat similar criteria apply as well as additional start-up criteria — Box 7.4) or for the renewal of a determination where different criteria apply (Box 7.7).

With regard to being reasonably capable of obtaining the necessary approvals to operate on the route, the IASC has stated that it 'seeks advice from the Department on these criteria, which relates to such matters as the carrier's ability to be designated as an Australian airline and to obtain an International Airline Licence and an Air Operator's Certificate' (sub. 42, p. 7).

The second test is whether the carrier is reasonably capable of implementing its proposals. This involves two main components:

- an examination of the carrier's business plan, to determine whether the carrier can be expected to break even within five years; and
- a requirement that the carrier have sufficient funding to cover initial set-up costs, and the operational cost of running the proposed service for six months without any offsetting revenue (Carlson 1997).

Combined, these tests require an airline to have the capability to operate before receiving approval to commence operations.

Box 7.3 Policy statement — general criteria for assessing benefit to the public

4.1 Subject to 6 below, the general criteria against which the benefit to the public is to be assessed by the Commission in considering the circumstances in relation to an allocation of capacity or the renewal or review of a determination allocating capacity to an Australian carrier are as set out below:

Use of Australian carrier entitlements

(a) Subject to (b), the use of the entitlements of Australian carriers under a bilateral arrangement is of benefit to the public.

Carrier capabilities

(b) It is not of benefit to the public for the Commission to allocate capacity to Australian carriers unless such carriers:

- (i) are reasonably capable of obtaining the necessary approvals to operate on the route; and
- (ii) are reasonably capable of implementing their proposals.

...

Capacity not limited

6.1 In circumstances where capacity is not limited under a bilateral arrangement, only the criteria in 4 above are applicable.

One applicant or sufficient available capacity

6.2 In circumstances where:

- (a) there is only one applicant (or where more than one application is made but all applications except one are withdrawn) for allocation of capacity on a route; or
- (b) there is more than one applicant but, subject to 7.4 below, the amount of available capacity is equal to or exceeds the total amount of capacity applied for.

only the criteria in 4 above are applicable. However, if submissions are received about, or opposing, the allocation of capacity to a particular carrier, the Commission may also apply additional criteria in 5 [see Box 7.4] above.

Source: Sharp (1997).

7.6.1 Rationale for the tests

Since the introduction of the IASC Act, a number of rationales have been suggested for these tests. The main arguments for these tests are to:

- attempt to ensure airlines do not collapse after commencing services as there would be:
 - a direct cost to consumers who would be stranded overseas if an airline collapsed¹; and
 - a cost to the reputation of Australian tourism and other Australian airlines if an airline collapsed; and
- attempt to ensure airlines take up capacity that is allocated, as there is a need to ensure capacity is not left idle and an obligation to bilateral partner governments.

Protecting consumers from airline collapse

In a research paper prepared for the IASC, Carlson argued:

... it is possible that a new entrant may be unable to sustain its services [and] may need to withdraw from the route at a later date. Depending on the nature of this withdrawal, the cost to the community of the airline's withdrawal may outweigh any initial benefits from allocating the capacity. These costs may include damage to the Australian tourism industry, additional costs to stranded passengers and the perception that Australian carriers provide poor quality services, reducing the competitiveness of other Australian carriers. Consequently, it may be possible that the community is better served by the IASC not making an allocation to the new entrant (1997, p. 5).

The main costs to consumers from the collapse of an international airline are the direct cost of pre-purchased tickets and the cost of being stranded overseas (if passengers are without travel insurance). However, these costs should be compared with the additional benefits to consumers of reduced fares and new routes as a result of competition from new entrants. Carlson (1997) suggests that a new entrant would not have to remain in the market for long before the benefits to consumers outweighed the direct costs of airline failure.

General consumer protection is provided through the *Trade Practices Act 1974*. Industry specific protection is not provided for consumers in the markets for most other products in Australia. Such consumer protection provisions, for example, do not apply to domestic airlines or surface transport. Neither the policy statement nor the attached explanatory statement provide a solid rationale

¹ This is quite separate from passenger safety issues (Chapter 6).

for additional consumer protection regulations for the international airline industry. DTRD argued:

It is standard for new carriers to claim ‘government approval’ or ‘government approval pending’ in advertisements ... If we licence someone, we must satisfy ourselves that they are capable of doing what they hold out to less well-informed parties they will do (and from whom they take large amounts of money in advance). The general protection laws do not take this issue into account (sub. 60, p. 16).

In many areas where deceptive advertising has been a problem, the ACCC (which enforces the Trade Practices Act) has been able to focus resources on that area. For example, since deregulation of the telecommunications market, the ACCC has actively focused on deceptive advertising in that area, developing with industry participants the ‘Faircall’ guidelines to good practice in advertising. It may be appropriate for the ACCC to focus on international airlines if it considers that there are major problems. Alternatively, DTRD could, as part of the licensing agreement, require that ‘government approval’ not be used in advertising.

If the government wishes to provide specific consumer protection for customers of new Australian international airlines, a better system might be that used for charter operations — a bond to cover the cost of returning passengers to their home country. Alternatively, customers could be encouraged to insure against such events, using commonly available travel insurance.

Protecting the reputation of the industry

The second argument for viability testing is that there is a cost to the reputation of Australian tourism and other Australian airlines if an airline collapses. No evidence has been submitted during this inquiry to support this argument.

Attempting to ensure airlines take up capacity

It has been argued by a number of participants that scarce capacity should be used, and that the tests are justified in order to ensure that that this aim is achieved. The South Australian Government argued:

If contested capacity is awarded to an airline according to public benefit criteria, then the public should have a reasonable expectation that the airline is capable of operating it. It should not be left to events to prove otherwise so that the public is denied the benefit of another airline operating the capacity in the interim (sub. 63, p. 6).

This is a valid concern in the adjudication of contested operations. When assessing different applications for capacity, the IASC should take into account the ability of an airline to service the capacity for which it applied. However in

uncontested applications the same rationale does not apply. If an applicant is refused capacity because it does not pass the tests then the capacity will not be utilised. Where the choice is between the capacity not being utilised and being allocated to a carrier, even a new untried carrier, it would seem appropriate to allocate the capacity.

In addition, it is possible that a carrier could apply for capacity to ‘lock out’ competitors, with no intention of starting service. Thus the most appropriate response is to rely on existing safeguard procedures, such as the use-it-or-lose-it principle, rather than applying restrictive tests in the allocation process.

The obligation to bilateral partners

It has been argued that as the government must designate Australia’s international airlines, it has a duty to ensure that they be of a suitable standard and that they are likely to operate allocated capacity. DTRD stated that the government must designate Australian international carriers and must indicate these carriers to foreign governments (sub. 60, p. 16). Qantas stated:

Qantas is also mindful of the need to avoid the ‘locking up’ of capacity by awarding it to carriers which ultimately fail to accumulate the capital and other resources needed to commence operations or to obtain operational approvals. Experience shows that the award of capacity to airlines which have not met minimum standards can be damaging to Australia’s international aviation reputation (sub. 67, p. 28).

The Commission accepts that there is the possibility of some small cost due to airlines not starting, but judges that this is outweighed by the benefits provided by allowing more new entrants to the international aviation market.

7.6.2 Costs of the tests

The IASC accepts that in all but exceptional circumstances, established airlines are able to meet the two tests and requires no additional information from those airlines (sub. 62, p. 2). However, in the case of start up airlines, the resources required to pass the tests may be significant.

Australia World Airways estimated that the cost incurred in meeting IASC requirements was in the range of \$350 000 to \$400 000 (transcript, p. 6), although a significant portion of this may have been required anyway for business and finance raising purposes. DTRD and the IASC argued that the IASC processes involved little if any additional cost. DTRD stated:

... the provision of business plans to the IASC, as part of the viability test, should not be an unreasonable or costly requirement. They are usually prepared by carriers in any event as a part of prudent business practice (sub. 60, p. 16).

However, this raises the question: if the viability test requires no additional effort on behalf of the airline, what is the purpose of undertaking the tests? If any business is required to prepare the same documents to pass the ‘tests’ of the financial market in raising capital, and if the purpose of the IASC is to assess financial credibility, then there would appear to be little reason for the IASC to run similar tests based on the same documents.

Based on evidence presented to the Commission, the IASC testing process does impose costs on new entrants. Australia World Airways stated that:

These applications are extraordinarily detailed. I mean ... it was something of the unabridged edition of *Ulysses* by the time that we’d finished with this and of course the processes of building up an application and a submission of those dimensions becomes extremely costly (transcript, p. 448).

Australia World Airways considered that the IASC process delayed them at least two years (transcript, p. 450). Requiring applicants to show that they are likely to pass licensing procedures, before they actually apply for those licences, also imposes costs.

Australia World Airways, estimated that the cost of satisfying the Civil Aviation Safety Authority that it could meet its licensing criteria was approximately \$400 000, even before it had obtained any aircraft, or received approval from the IASC to operate on any route (transcript, p. 8). While these costs would have to be incurred eventually, the use of these tests by the IASC means that the expenditure is incurred earlier than necessary as Australia World Airways stated:

... as far as CASA [Civil Aviation Safety Authority] is concerned we went through the processes necessary to demonstrate to the [IASC] that we were reasonably capable of being able to commence commercial operations and being licensed. As part of that, although we didn’t apply formally for the necessary licences through, for instance, CASA, we of course had to demonstrate that we had the capability to apply for those licences and once applied carry through and be granted the licences (transcript, pp. 7–8).

Small, fledgling airlines have found it more difficult to demonstrate that they have the required funding (sub. 42). The IASC indicated that a number of proposals by new airlines were rejected:

... because the applicants were not able to show that they were reasonably capable of implementing their proposals. This was generally because their business plans were deficient, the revenue projections were over-optimistic or, most commonly, they lacked the necessary funding. Nevertheless, some of these start-up carriers could be a source of potential competition, particularly on thin or niche routes where start-up costs are lower and smaller aircraft can be used for passengers or freight (sub. 42, p. 16).

The effect of these costs is to deter new entry by start-up airlines. For example, Tropic Isle Air reported that:

An examination of the draft determination by the IASC demonstrates that the Commission was not convinced that Tropic Isle Air was reasonably capable of raising the necessary capital to commence operations. It is our view that it is not the place of the IASC to make this determination and it was used as a justification for denying capacity.

Tropic Isle Air had an undertaking from one of Japan's largest tour operators that they would enter into an agreement to provide the company's working capital and start-up funds to enable the airline to commence business. The agreement acknowledged that these funds would only become available after capacity was allocated. The IASC were unable to accept that the funds would be made available if capacity was granted (sub. 58, p. 2).

Conclusion

A number of rationales have been put forward for the application of these tests during the processing of applications for capacity allocation. These existing provisions are confusing and can impose costs on airlines, particularly small, start-up airlines. In international air services, where there are only two domestic airlines, start-up airlines can provide some additional competition. The threat of new entrants is one of the major competitive forces which provide pressure for firms constantly to watch costs and improve services.

These tests, which apply on all applications for route capacity, also overlap with other regulatory procedures, such as the application to the Civil Aviation Safety Authority for an Air Operator's Certificate and to DTRD for a International Airline Licence.

It is important that an administrative allocation system be designed and implemented to provide the greatest net benefit over costs. The benefits from these tests as they apply to route allocation appear uncertain, while the costs may be significant. For example, these tests are a poor method of providing consumer protection, yet they screen out many start-up airlines, which may have provided additional competition and benefit to consumers on a number of routes.

The Commission accepts that the Commonwealth Government has some obligation to satisfy itself as to the bona fides of a new airline applying for Australian flag carrier status, for example, to apply a 'fit and proper person' test for operators of new international airlines. This should be done by DTRD as part of the process for approving international airline licences, independent of the allocation of the route rights to airlines. Testing the bona fides of airlines in regard to applications for capacity confuses targets and instruments and imposes

unnecessary costs. The IASC's role should be to allocate capacity to airlines, focusing on the relative merits of applicants in contested cases, while DTRD undertakes limited bona fides tests.

Recommendation 7.3

The IASC should not be involved in assessing the viability of airlines, or anticipating approvals by other government agencies.

Were this recommendation to be accepted, the allocation of *uncontested* capacity would be a simple administrative procedure which would not require the involvement of a specialist agency. Instead, uncontested allocation could be undertaken by DTRD — which maintains the register of available capacity and is involved in other aspects of airline regulation. Where an application is contested, it would be referred to the IASC for adjudication.

Recommendation 7.4

When international capacity becomes available, or is applied for, it should be advertised by DTRD.

Where an application for capacity is uncontested (that is, only one applicant), or capacity is not constrained, the allocation of that capacity should be approved automatically by DTRD.

It should be the responsibility of the airline to meet all other regulatory and financial requirements before the commencement date.

Where an application is contested, the IASC should determine the allocation of capacity.

7.6.3 Objections

The Act requires the IASC to take submissions whenever new capacity is advertised or a carrier applies for new capacity. Submissions may be made by many parties, including airlines operating on competing routes. Although the Minister's policy statement indicates that the use of the capacity is of benefit to the public, a submission opposing an allocation (even on uncontested routes) may be sufficient reason for the IASC to apply a full range of additional criteria (Section 7.7).

The collection of submissions is an important aspect of a transparent, public review process for contested applications. However, uncontested applications merely involve airlines introducing new services, or supplementing or expanding their range of products. If there is spare capacity, there is a strong presumption that it would be in the public interest that the capacity be used and there would appear to be no justification for denying that use.

When the Commission proposed disallowing submissions in the draft report, some participants argued for retaining them. For example, the Australian and International Pilots' Association argued:

Bilateral rights are the property of the Commonwealth of Australia, not the airlines allocated the capacity. Interested parties with a legitimate position should be provided with a forum to present their positions. This proposal, if accepted, will remove the IASC forum, which currently provides a workable public benefit test on all bilateral allocations (sub. 61, p. 7).

Any public process, such as that undertaken by the IASC, should allow public submissions. However, if the government were to accept the recommendation that all non-contested capacity be allocated automatically, there would be no role for objections to uncontested route allocations, as there would be no scope for the IASC to reject the application. For contested allocations, however, the public consultation process is important, and submissions should be sought.

Recommendation 7.5

Submissions should not be called for unless a contested allocation is referred to the IASC.

7.7 Allocation on contested routes

If an application for constrained capacity is contested, or if a submission opposing the application is tendered, the IASC may use the additional criteria provided in the Minister's policy statement (Box 7.4). They consist of factors that the IASC should consider when allocating capacity under the public interest test.

Box 7.4 Policy statement — additional criteria for assessing benefit to the public

5.1 The following additional criteria are applicable in assessing the benefit to the public in all circumstances other than as provided in relation to particular circumstances described in 6 below:

Tourism Benefits

- (a) The extent to which proposals will promote tourism to and within Australia. The Commission should have regard to:
- the level of promotion, market development and investment proposed by each of the applicants; and
 - route service possibilities to and from points beyond the Australian gateway(s) or beyond the foreign gateway(s).

Consumer Benefits

- (b) The extent to which proposals will maximise benefits to Australian consumers. The Commission should have regard to:
- the degree of choice (including, for example, choice of airport(s), seat availability, range of product);
 - efficiencies achieved as reflected in lower tariffs and improved standard of services;
 - the stimulation of innovation on the part of incumbent carriers; and
 - route service possibilities to and from points beyond the Australian gateway(s) or beyond the foreign gateway(s).

Trade Benefits

- (c) The extent to which proposals will promote international trade. The Commission should have regard to:
- the availability of frequent, low cost, reliable freight services for Australian exporters and importers.

Competition Benefits

- (d) The extent to which proposals will contribute to the development of a competitive environment for the provision of international air services. The Commission should have regard to:
- the need to develop strong Australian carriers capable of competing effectively with one another and the airlines of foreign countries;

- the number of Australian carriers using capacity on a particular route and the existing distribution of capacity;
- the extent to which applicants are proposing to provide capacity on aircraft they will operate themselves as, in the long term, operation of capacity on own aircraft is likely to result in more competitive outcomes;
- the provisions of any commercial agreement between an applicant and another airline affecting services on the route but only to the extent of determining comparative competition benefit between competing proposals; and
- any determinations made by the Australian Competition and Consumer Commission or the Australian Competition Tribunal in relation to a carrier operating or proposing to operate on all or part of the route; and
- any decisions on notifications made by the Australian Competition and Consumer Commission in relation to a carrier operating or proposing to operate on all or part of the route.

Industry Structure

- (e) The extent to which proposals will impact positively on the Australian aviation industry.

Other Criteria

- (f) Such other criteria as the Commission considers relevant.

5.2 The Commission is not obliged to apply all the criteria set out in 5.1 if it is satisfied that the important criteria in the circumstances have been met.

Source: Sharp (1997).

The allocation of capacity on contested routes is the central purpose of the IASC and these additional criteria play a pivotal role in ensuring that the allocation of capacity provides the maximum benefit to the public. The additional criteria have been used in around one quarter of all determinations made, with even higher proportions on some more highly constrained routes such as Japan–Australia (Table 7.1).

Table 7.1 Determinations using additional criteria, June 1992 to February 1998

Route to:	Determinations		Route to:	Determinations	
	Using additional criteria	Total		Using additional criteria	Total
Austria	–	2	Netherlands	2	10
Canada	–	2	New Caledonia	–	3
Chile	–	2	New Zealand	1	6
China	4	10	Noumea	1	?
Dubai	–	2	Papua New Guinea	–	6
Fiji	–	1	Philippines	2	5
France	1	1	Singapore	3	19
French Polynesia	–	2	Solomon Islands	1	2
Germany	1	2	South Africa	1	4
Greece	1	5	Sri Lanka	–	4
Hong Kong	4	10	Taiwan	1	4
India	–	3	Thailand	2	2
Indonesia	4	19	United Kingdom	1	4
Italy	–	2	United States	–	1
Japan	7	12	Vanuatu	1	3
Korea, Republic of	2	19	Vietnam	2	3
Malaysia	–	8	Zimbabwe	–	2

Source: IASC (unpublished).

With any allocation process under a public interest standard, there is a conflict between providing a complete and inflexible set of criteria (which creates a costly and bureaucratic process) and allowing administrative discretion by providing no or limited criteria (which reduces transparency and the probable consistency of the process) (Breyer 1982). As DTRD stated:

What therefore happens is that either by having a simple objective and then subsequent elaboration as a result of the experience of particular cases, a body of interpretation evolves, or alternatively you have a policy statement which probably has the same problems attached to it. It becomes complex and attempts to respond to particular cases (transcript, p. 413)

It is important to achieve a correct balance between prescriptive criteria and flexibility. The current criteria contain many factors which need to be considered in allocation decisions. As the IASC stated, it is required:

... to examine the extent to which each proposal, if implemented, would: promote tourism to and within Australia; benefit consumers through lower fares, increased consumer choice or improved standard of service; promote international trade through the availability of low cost and reliable freight services; contribute to the development of a competitive environment in which strong Australian carriers are able to compete effectively with one another and the airlines of foreign countries; and impact positively on the Australian aviation industry (sub. 42, p. 8).

The IASC is not obliged to use all the criteria above and may use others that it considers relevant.

As with the objectives of the IASC Act, there appears to be some confusion with the criteria as they list competition benefits along with a number of other benefits which are likely to arise from competition (for example, tourism benefits).

A number of relevant factors should be considered when determining the competitive benefits of particular applications, for example:

- the introduction of new carriers to the route;
- the ability of a carrier to provide an efficient service, such as by providing a daily frequency;
- the competitive effects of codesharing arrangements; and
- the ability to commence services and the timing of commencement.

While the Commission is wary of over simplifying the allocation criteria, there is a presumption that increased competition will provide benefits, and indeed, the Competition Principles Agreement stipulates that this should be the primary criterion used in allocating capacity. Thus the criteria should be simplified such that competition benefits are the major factors in determining the allocation of capacity on contested routes.

Recommendation 7.6

The criteria used by the IASC to allocate contested capacity should be simplified to focus on benefits from competition.

7.8 Start-up provisions

If a capacity allocation is contested, special start-up provisions may apply in certain circumstances (Box 7.5). These provide a weighting towards a new entrant on a route, where the primary consideration is the introduction of competition on that route (Sharp 1997). Separate criteria are applied during the start-up phase allocating the new entrant a commercially sustainable level of capacity when other conditions are met. Freight allocation is treated differently, with a separate start-up phase.

The start-up phase lasts until a new entrant on a route has been allocated a commercially sustainable level of capacity on that route. When the start-up phase ends, all further capacity is allocated using the normal criteria for contested routes. These start-up criteria add to the complexity of the policy statement.

While the IASC should encourage competition on all routes to and from Australia, the start-up provisions currently do this in an arbitrary way. In some cases the assistance given to the start-up carrier on a route may be unwarranted. It should be noted that the start-up provisions relate to new entrants on a route, not new airlines.

The main objective of multiple designation and the IASC process has been to introduce greater competition into international air services by encouraging additional Australian carriers onto routes. The start-up provisions have been a key component of the policies implemented to achieve this objective. Ansett stated that:

This approach works well to achieve viable competitors on a route. There are scale economies and set up costs. Airlines without viable services (possibly daily services on busy routes) are at a competitive disadvantage vis a vis their competitors, and it takes several years for a new airline on a route to become known and build up market contacts. By recognising this, and by enabling an initial new entrant to achieve viability as soon as possible, competition in the longer term is increased. Granted the advantages the incumbent has, new firms will be discouraged from entering on less restrictive and less profitable routes (sub. 19, p. 49).

However, this may come at some cost — for example, the incumbent carrier may not obtain the capacity it may have received otherwise. It was noted that:

... Qantas, which on many routes is the incumbent carrier, would not be successful in competing for available capacity against a start up carrier even if it could demonstrate a greater level of benefit from its service proposals in the absence of the start up rules (sub. 25, p. 60).

The main effect of the start-up provisions appears to have been the development of Ansett International as a second international carrier.

Box 7.5 Policy statement — start-up phase criteria

2.1 In this Policy Statement, unless the contrary intention appears:

‘new entrant’ means, in relation to a route, an Australian carrier which has not previously been allocated a commercially sustainable level of capacity in relation to that route.

‘start-up phase’ means, in relation to any route, the period from 1 July 1992, or from such later date as a particular bilateral arrangement becomes subject to the Act in order that available capacity under that arrangement may be allocated by the Commission, until the date on which a determination has been made under section 7 or 8 of the Act allocating a commercially sustainable level of capacity on the route to a new entrant (see section 7 for further details).

‘commercially sustainable level of capacity’ means the minimum capacity necessary to allow a level of scheduled international services necessary to permit the development of efficient, commercially sustainable operations on a route.

7.1 Subject to 6.1 above [see Box 7.2], during the start-up phase in relation to any route on which an Australian carrier is already operating scheduled international services, the pre-eminent consideration is to introduce competition on the route through allocating to an initial new entrant a level of capacity appropriate to the development of efficient, commercially sustainable operations. The Commission should allocate such capacity to an initial new entrant, providing it is satisfied that:

- (a) the level of capacity available and in prospect is sufficient to support a level of services necessary to permit the development of efficient, commercially sustainable operations by both a new entrant and an incumbent Australian carrier; and
- (b) the proposed new carrier's tariff and service proposals would enhance competition on the route; and
- (c) approval would not result in a decrease in inbound tourism to Australia, Australian consumer benefits or trade; and
- (d) the proposed new carrier is reasonably capable of obtaining the necessary approvals and commencing operations as proposed.

7.2 Where a bilateral arrangement provides for dedicated freight capacity in addition to other capacity (whether that other capacity is for passenger services alone or in combination with, or convertible to, freight services however described) the start-up phase criteria will be applied separately in relation to:

- (a) capacity involving the operation of passenger services (even if freight is also carried on those services); and
- (b) capacity for the operation of dedicated freight services only (irrespective of whether this would involve the use of dedicated freight capacity or the use of dedicated freight capacity in combination with other capacity under a bilateral arrangement);

and the application of the start-up phase criteria in the case of either (a) or (b) above will not end the start-up phase in the case of the other.

7.3 An Australian carrier seeking an allocation of capacity, or which may be permitted to use capacity allocated to an incumbent Australian carrier, will not be taken to be a new entrant if it is a subsidiary or a holding company of an incumbent Australian carrier operating on the route or if there is some other substantial connection between the two carriers in relation to ownership and control.

7.4 Where there are applications for capacity on a route during the start-up phase by two or more prospective new entrants, the criteria set out in 4 and 5 above [Box 7.3 and 7.5] are to be applied in selecting one of those applicants as the initial new entrant to be allocated the level of capacity referred to in 7.1.

7.5 Where the available capacity on the route exceeds the level of capacity referred to in 7.1, the criteria in 4 and, subject to 6.2, in 5 above are to be applied in considering the allocation of the balance of the capacity.

7.6 Where the Commission invites applications for capacity on a route during the start-up phase and none of the applications received are from prospective new entrants, the criteria in 4 and, subject to 6.2, in 5 above are to be applied in considering an allocation.

7.7 In considering determinations during the start-up phase, the Commission shall have particular regard to the possible use of interim determinations to facilitate the introduction of competition on the route without any unnecessary delay in the use of the capacity.

Source: Sharp (1997).

These provisions may have been justified as a transitional adjustment arrangement. The significant changes in 1992 — with Qantas entering the domestic market and Ansett International obtaining access to the international market — may have warranted some transitional support. Given Ansett's domestic network, it was always the most likely new entrant to the international market:

It would seem to Ansett improbable that other Australian airlines who will not have the benefit of extensive domestic networks to provide feeder traffic to and from international services could compete effectively internationally other than on a regional 'niche' basis or on a limited charter basis (sub. 19, p. 46).

The IASC (sub. 42) argued that the start-up provisions will become less important over time because a new entrant is not able to challenge existing capacity allocations. Only the initial new entrant on a route is entitled to take advantage of the start-up provisions and the start-up provisions cannot be reactivated if a carrier withdraws.

Submissions were received that argued against the start-up provisions. Qantas stated:

... the new entrant policy is a market distortion which should be avoided. Moreover, the circumstances which were evident when the new entrant policy was established in 1992 no longer exist and, whatever the arguments for and against the policy at that time, there is no case now for its retention (sub. 25, p. 61).

This viewpoint was opposed by the South Australian Government:

The SA Government does not have a strong view about whether the start-up provisions of the IASC's policy statement should be retained or not. However, there seems to be little evidence that they constitute the market distortion that Qantas claims in its submission, or that, if properly applied, they might result in Qantas or other incumbent carriers failing to win capacity contested by a start-up carrier *'even if it could demonstrate a greater level of benefit from its service proposals'*. The requirement for the IASC to award capacity to the start-up carrier only if the *'approval would not result in a decrease in inbound tourism to Australia, Australian consumer benefits or trade'* should be sufficient safeguard against that (sub. 63, p. 6)

The Commission considers that it is no longer appropriate that the start-up provisions apply. The introduction of competition should be the central concern of the policy statement. The more appropriate avenue for introducing competition is through the additional criteria which apply on all contested applications, as outlined above.

Recommendation 7.7

The start-up provisions should be removed from the Minister's policy statement.

7.9 The use-it-or-lose-it principle

The policy statement includes a use-it-or-lose-it principle, whereby capacity must be used fully by the period specified in the original determination. If capacity is not used fully, the Act grants the IASC the power to review determinations, and it may vary, suspend or revoke the allocation (Box 7.6).

The policy statement states: “the use of the entitlements of Australian carriers under a bilateral arrangement is of benefit to the public” (Sharp 1997) and the main purpose of the use-it-or-lose-it principle is to maximise public benefit by allowing carriers sufficient time to commence operations, and ensuring that capacity is used fully once operations have commenced.

Box 7.6 Policy statement — use-it-or-lose-it principle

9.1 For the purposes of specifying a period within which capacity allocated to an Australian carrier must be fully used, the Commission should specify as short a period as is reasonable having regard to the steps required to commence operations. Except in exceptional circumstances, the Commission should not specify a period exceeding 3 years.

Source: Sharp (1997).

Concerns about the practical operation of the use-it-or-lose-it principle include the potential for airlines to hoard entitlements. The ACCC noted that:

The existence of capacity limits creates the possibility that airlines will seek to ‘hoard’ capacity entitlements to prevent other airlines from using that capacity, either preventing competitors from entering the market or preventing existing operators from expanding. While a capacity allocation received from the International Air Services Commission (IASC) includes a condition that the capacity must be fully utilised from a specified date, this is not always enforced by the IASC (eg Fiji route). Similarly, the carrier with the allocation may never actually commence operations with that capacity or seek continuous deferral of the date by which it must use the capacity (eg Ansett to Malaysia, Qantas to South Africa, Australia World Airways to Greece). Such behaviour, if successful, may lessen competition by restricting competitors expanding their operations or new entrants establishing services. If there is ample capacity available then this incentive to ‘hoard’ entitlements is eliminated (sub. 49, p. 6).

The IASC also noted that there may be problems with the application of this principle:

The strict application of this use-it-or-lose-it principle can create difficulties for carriers operating on routes where there is a pronounced seasonal variation in passenger or freight traffic (for example, on the Australia–Fiji route). The strict application of this principle would require that in the seasonal trough capacity be handed back, with a fresh application needed to regain the capacity in time for the seasonal peak. This aspect of the regulatory system can create uncertainty for the carrier and involve higher administrative costs and burdens for the carrier and the IASC (sub. 42, p. 23).

Thus, generally the use of allocated capacity on a constrained route should be enforced using the use-it-or-lose-it principle to ensure that all current and potential carriers have the ability to apply for capacity not in use, but a

reasonable length of time should be considered to allow for seasonal variations. Also, carriers need sufficient flexibility to deal with special circumstances — for example times of cyclical downturns — without incurring additional administrative costs. Qantas argued for a flexible approach:

Perhaps more relevant in current industry circumstances, has been the need for the Commission to consider case by case whether capacity which carriers have been using but is now in suspension against the possibility that the market will pick up should be handed back or kept by carriers in reserve. In these circumstances, Qantas has generally sought some flexibility under the use-it-or-lose-it formula on the understanding that if another carrier had a use for the capacity it would be returned. This suggests to Qantas that, overall, this is an area where flexibility rather than a more prescriptive approach is needed (sub. 67, p. 23).

The Commission believes it would be difficult to specify administrative rules for applying the use-it-or-lose-it principle in such circumstances. Thus it considers that the IASC should continue to enforce the use-it-or-lose-it principle rigorously on all routes, making allowances, based on its considered judgment, where there are justifiable reasons for not using capacity temporarily. This should also include rigorously enforcing time limits on starting services on a route.

7.10 Renewal of determinations

IASC determinations generally hold for five years and are then reviewed. The renewal criteria differ depending on whether the route is in start-up phase (Section 7.8).

If the route is still in start-up phase and a new entrant applies for some of the capacity held by the incumbent at the time of the renewal, start-up phase criteria apply to that part of the capacity necessary to the development of efficient, commercially sustainable operations (Box 7.7).

Box 7.7 Policy statement — renewal of determinations criteria

8.1 Subject to 6.1 [Box 7.3] above, the criteria for assessing the benefit to the public for the purposes of renewal of determinations, other than interim determinations, are as set out below, reflecting a presumption in favour of the carrier seeking renewal which may be rebutted only by application of the criteria in the circumstances described:

- (a) During the start-up phase on the route:

- the start-up phase allocation criteria set out in 7 above apply in relation to that part of the capacity which is reasonably necessary for a level of scheduled international services necessary to permit the development of efficient, commercially sustainable operations; and
- the criteria set out in 8.2 below apply to the balance of the capacity.

(b) After the start-up phase on the route, the criteria set out in 8.2 below apply.

8.2 After the start-up phase on the route, the criteria for assessing benefit to the public are:

- (a) whether the carrier seeking renewal has failed to service the route effectively; and
- (b) whether use of the capacity in whole or in part by another Australian carrier which has applied for that capacity would better serve the public having regard to the criteria set out in 4 and 5 above;

and the Commission should allocate the capacity to the carrier seeking renewal unless both of those criteria are met, in which case all or part of the capacity can be reallocated.

Source: Sharp (1997).

If the start-up phase has ended, or if capacity is still available after an allocation to the new entrant under the start-up phase criteria, the IASC allocates capacity to the carrier seeking renewal except where:

- the carrier has not serviced the route ‘effectively’; and
- an airline which would better serve the public has applied for capacity.

The two main aims of the renewal process appear to be to ensure capacity is used and allow new entrants some ability to obtain capacity held by incumbents.

Incumbents in all non-start-up phase reviews so far have had their determinations renewed. If an incumbent carrier was suspected of not using its capacity, the IASC would have instituted a review under the use-it-or-lose-it principle (Section 7.9). Capacity should have been revoked where not being used (sub. 42).

The renewal process is not costless. It imposes a cost on both the IASC and carriers. Qantas argued that ‘the requirement to seek the renewal of allocations every 5 years should be reviewed. The process is time consuming and costly for the Commission and the airlines involved’ (sub. 25, p. 60).

A cost is also imposed on the IASC in undertaking the reviews. This is exacerbated by the bunching of renewals at five-year intervals. When the IASC was established, the Minister issued determinations on capacity being used by

existing carriers. All these determinations expired on 30 June 1997, creating a considerable workload in the preceding 12 months (sub. 42). Qantas argued that extending determinations from five to ten years would reduce costs, while maintaining accountability (sub. 25).

Professor Brian Johns, a former IASC Commissioner, proposed options designed to overcome this problem:

- consolidating determinations;
- extending some determinations by one year;
- providing for indefinite terms, but allowing new entrants to challenge incumbents if substantially greater public benefits would result; and
- offering a choice of fixed or indefinite terms, whereby the incumbents may choose either a renewal of up to 6 years, or an indefinite term, during which new entrants can apply for the capacity if they can demonstrate substantially greater public benefits (sub. 42).

The most appropriate approach may be to make capacity allocations in perpetuity. It has been argued that the renewal process helps ensure that capacity is used fully. However, it duplicates the operation of the use-it-or-lose-it principle, which should be capable of ensuring capacity is used. The South Australian Government stated:

The SA Government cautiously supports the Commission's view that allocation of capacity should be made in perpetuity and the principle that new entrants' access to capacity should be by 'expanding available capacity, rather than the redistribution of constrained capacity.' This presupposes that the IASC must enforce its use-it-or-lose-it powers to ensure that an incumbent carrier cannot block access to a route while failing to operate it itself, and that available capacity can be negotiated to meet demand (sub. 63, p. 7).

Ansett does not support allocating capacity in perpetuity:

The arrangements put in place in 1992 were developed in such a way as to achieve a balance between the interests of the incumbent carrier and potential new entrants ... If determinations are to be made in perpetuity, as recommended by the Commission, this already reduces the opportunities for the start-up provisions to be applied (sub. 66, p. 6).

There may be a cost on certain routes where capacity is not expanded and the granting of capacity in perpetuity may entrench a monopoly carrier. However, given the world-wide trend towards liberalisation of air services, the current policy of expanding capacity ahead of demand, and allocation criteria that encourage competition, the Commission considers this unlikely. It is more appropriate to give new entrants access to capacity by expanding available capacity, rather than the redistribution of constrained capacity.

Recommendation 7.8

Capacity allocations should be made in perpetuity and the IASC should be rigorous in enforcing the use-it-or-lose-it provisions.

7.11 Relationship with the ACCC

A number of participants noted the apparent duplication of effort between the IASC and the ACCC in their assessment of applications for codesharing (and scope for inconsistent decisions). This overlap occurs because both the IASC and the ACCC may assess the competitive effects of a codesharing proposal.

The ACCC is an independent statutory authority which administers the Trade Practices Act, and seeks to prevent or limit anticompetitive conduct (sub. 49). Codesharing, as a joint service arrangement, may have anticompetitive effects, so it comes within the jurisdiction of the ACCC.

Many of Australia's ASAs explicitly allow for codesharing arrangements. If a carrier wishes to operate on a route on a codeshare basis, it must have capacity allocated under the appropriate ASA.

On contested or opposed applications for capacity, broad public interest criteria of the IASC include a range of competition factors. Further, in considering any applications involving codesharing, the IASC considers the impact of the application on competition. This occurs regardless of whether there are competing claims for the capacity, based on the objective of the International Air Services Commission Act to 'consider the extent to which any proposal would contribute to the development of a competitive environment for the provision of international air services' (sub. 42, p. 35).

The ACCC noted that there are fundamental differences between the roles of the IASC and the ACCC in assessing competition issues:

The IASC must be proactive in its consideration of competition issues whereas the ACCC may be reactive in its role ... An Australian airline requires an allocation from the IASC before it can commence operations. In obtaining an allocation, the airline must submit its business proposal and have it assessed by the IASC.

This is contrasted with the ACCC, where an airline can implement its business proposal without prior approval from the ACCC. Of course, the airline runs the risk of action subsequently being taken by the ACCC if there are competition concerns. Thus the ACCC is reactive. Should the airline apply for authorisation under the Trade Practices Act then the ACCC is proactive in considering the proposal prior to its implementation. However, the option remains for airlines to bypass the ACCC whereas they cannot bypass the IASC.

The Commission's experience to date suggests that airlines are well aware of their obligations under the Act and normally seek authorisation for possible anticompetitive behaviour before implementing it (eg Qantas/British Airways Joint Service Agreement) (sub. 49, p. 10).

Several participants expressed concern about the overlap between the ACCC and IASC. Qantas argued that responsibility for examining the competition aspect of codeshare arrangements must be clarified. Qantas found that the current system has led to both the IASC and the ACCC examining its codesharing arrangements from a competition perspective (transcript, p. 122). British Airways highlighted the additional cost imposed by such duplication:

It appears to BA that under these circumstances it was wasteful and unnecessary for the IASC to examine the agreement which had been specifically allowed for in the changes to the bilateral negotiated by the Australian government and which had the acquiescence, and was under the future oversight, of the Australian competition authority (sub. 36, p. 6).

Similarly, Ansett argued that the overlap of responsibilities creates duplication, and adds to the complexity, time and cost of codeshare applications:

... if you're going to have a regulatory regime, [the] regulators should have clear functions and charters. It doesn't seem sensible to have to go through a series of different regulators on one issue. It's not an efficient way to organise government regulation (transcript, p. 194).

Further, it has been argued that the IASC does not have the jurisdiction to consider certain competition issues. DIST argued that:

According to the explanatory notes [to the policy statement] 'the IASC is to assess a commercial agreement between an applicant and another airline affecting services on a route only to the extent of determining comparative competitive benefit between competing proposals'. It appears that the role of the IASC may only be to rank proposals on the basis of their competitive benefits, rather than adjudicate on their competitive merits. The explanatory notes go on to state that the 'wider responsibility relating to possible anti-competitive effects of commercial arrangements is the responsibility of the ACCC' (sub. 31, p. 32).

The Minister for Transport and Regional Development issued a revised policy statement for the IASC on 23 April 1997, stating in a letter to the Chairman of the IASC:

I wish to avoid the situation where airlines are subject to two approval processes in respect of the possible anticompetitive effects of a commercial agreement. In addition, I wish to see the aviation industry subjected, in a consistent manner, to the same general competition laws applicable to other industries. Accordingly, the amendments to the Policy Statement avoid duplication of work, and make the respective roles of the IASC and the ACCC more transparent to applicants (sub. 25, p. 57).

However, there may be still some conflict with aspects of the International Air Services Commission Act which guides the actions of the IASC. The IASC argued that:

One of the [IASC's] primary obligations under the Act is to consider the extent to which any proposal would contribute to the development of a competitive environment for the provision of international air services (sub. 42, p. 35).

The Act, the policy statement and the Explanatory Memorandum to the policy statement appear to having conflicting notions of the role of the IASC in assessing competition matters.

To deal with the overlap of responsibility, the IASC and the ACCC entered into a Memorandum of Understanding (MOU) to 'provide a framework for cooperation in undertaking their respective responsibilities when these responsibilities overlap' (ACCC and IASC 1997). The agreement recognises the overlapping responsibility of the agencies and commits the agencies to consult on matters that come before them that may involve the other agency, to take account of prior decisions of the other agency, and to seek comment from one another on matters before them of relevance to the other agency. However the fundamental problem of the overlap in responsibility remains.

This overlap imposes costs on governments and airlines. Governments incur undue administrative costs through conducting unnecessary processes. Airlines must participate in additional processes, deal with the additional uncertainty of facing two agencies that may reject their application, and risk additional delays as a result of these processes (Box 7.8).

Some participants argued that the IASC's consideration of codesharing should be limited to contested applications. Ansett argued that:

At present it appears that effort is in fact being duplicated and that both the ACCC and the IASC are considering the possible broader anti-competitive effects of commercial agreements. It is Ansett's strong view that the ACCC should be solely responsible for this task and that the IASC's role should be confined to considering the codesharing criteria in cases of competing applications or where there are submissions opposing the codeshare arrangements (sub. 19, p. 50).

Box 7.8 Qantas–British Airways codeshare application

The ACCC, on 12 May 1997, authorised a joint service agreement between Qantas and British Airways which covered a broad range of commercial arrangements, but not codesharing.

Qantas applied to the IASC on 11 September 1997 for capacity to codeshare with British Airways on the Singapore, Thailand and United Kingdom routes. Despite no other carrier

applying for the capacity, the IASC used the full additional criteria, because submissions opposing the application had been lodged. The ACCC has not made a decision regarding the impact of the codeshare on the authorisation.

The IASC made a draft determination on 17 October 1997 rejecting the application on the basis that it would not be of benefit to the public. Qantas, British Airways, State governments, tourism organisations and other bodies made further submissions. Then on 4 December the IASC approved the codesharing on the Singapore and UK routes, but rejected it on the Thailand route because it was not satisfied the relevant ASA allowed codesharing.

During the review, 64 separate documents were lodged on the public register, totalling over 220 pages. Qantas provided information on capacity, service frequency, seat availability, discount seats, information on foreign exchange effects, and revenue sharing arrangements, among other details. Qantas was required to reschedule the introduction of the services, as a result of delays in receiving approval.

The ACCC made no further decisions regarding the Qantas–British Airways agreement, allowing the authorisation to stand.

Source: IASC (1997a, 1997b, and 1997c).

Qantas argued that tightening of the MOU is required:

... Qantas would prefer to see the MOU make it clear that the ACCC is the primary body responsible for assessing the competition policy effects of service proposals and that the IASC has a responsibility to assess comparative competition benefits (rather than effects) only when it is relevant to decisions on competing applications.

Qantas suggests that it should be the responsibility of the Ministers responsible for the ACCC and IASC to authorise the MOU and that the opportunity might be provided for public comment before it is authorised as part of the transparency of process which lies behind many of the Commission's recommendations (sub. 67, p. 24).

The Commission considers that the specific roles of the ACCC and the IASC should be clarified, removing overlap in those roles, and that the IASC's consideration of codeshare applications should be limited to contested applications. Recommendation 7.4, to limit the IASC to the consideration of contested applications only, should go a long way to solving the current overlap.

7.12 Conclusion

The Commission found that the policy of multiple designation has brought significant benefits to Australia. The IASC allocation process is an appropriate

method of allocating capacity given the constraints imposed by the bilateral system. Despite making recommendations aimed at reducing the administrative burden of this process, the Commission found that the IASC process is fundamentally sound.

In summary, the Commission recommends that the objectives of the *International Air Services Commission Act 1992* be amended, and that the IASC not assess the viability of airlines, or anticipate the approval processes of other government agencies. In addition, the IASC should be limited to cases where capacity is contested, and the start-up provisions removed.

However, the Commission is aware that the IASC allocation process is a sub-optimal solution. While steps could be taken to streamline the process, greater gains could arise from rapidly expanding capacity to ensure its availability and avoid the need to adjudicate contested applications.

The Commonwealth, in the long term, should aim to create a framework for international air services that allows consumers to choose freely without governmental allocation of the rights to produce, as they can in most other markets for goods and services.

8 ACCESS TO AIRPORTS

Access to airport infrastructure is essential for the effective use of the entitlements under air services arrangements (ASAs). Restricted access to landing and take-off slots and other airport facilities (such as passenger terminals) may constrain the use of capacity available under existing ASAs. It may also limit the ability of governments to secure additional capacity for carriers. Further, congestion can impose significant costs on airlines and passengers.

8.1 Australian and overseas international airports

Australia's international airport network is of significant economic importance to the Australian community. Sydney is by far the busiest airport in Australia in terms of both passenger and freight traffic, processing three times the passenger traffic and double the freight traffic of the next largest airport, Melbourne. Passenger traffic through Brisbane airport in 1997 almost equalled that of Melbourne. Passenger and freight traffic in all mainland airports has increased over the past three years except in Adelaide and Port Hedland (Appendix C).

The value of airport infrastructure is difficult to estimate but the sale prices of four major Australian airports provide some indication. The sale of long-term leases at Melbourne, Brisbane, Perth and Adelaide airports — which accounted for 44 per cent of passenger and 42 per cent of freight movements in 1996 — realised \$3.34 billion (DTRD unpublished). A brief history of airport reform is presented in Box 8.1.

The Federal Airports Corporation (FAC) invested \$1.6 billion in infrastructure at its Australian airports from its commencement in 1988. Airport infrastructure projects typically involve long lead times and consist of 'lumpy' investments in significant renewal or expansion programs. Most investment in terminals and other infrastructure is needed to accommodate periods of peak demand. At non-peak periods much of the expensive infrastructure is under used.

Individual airlines have also invested in airport infrastructure. Ansett estimated the amount invested by Australian carriers at Sydney Airport in preparation for the Sydney 2000 Olympics at around \$500 million (transcript, p. 173).

Box 8.1 Australian airport reform

1988 Federal Airports Corporation (FAC) commences operations.

Full cost recovery is implemented for aviation facilities and services provided by the Commonwealth.

A 'single till' approach is introduced for applying uniform charges to all 22 FAC airports.

A weight based General Aviation Infrastructure Tariff is introduced for unlimited use of general aviation airports.

1991 Peak period charges are introduced at Sydney Airport.

1997 Melbourne, Brisbane and Perth Airports are privatised.

1998 The second phase of the airport privatisation program is implemented covering Adelaide, Alice Springs, Canberra, Coolangatta, Darwin, Hobart, Launceston and Townsville.

The slot management system is introduced at Sydney Airport.

Sydney Airport is corporatised and FAC abolished.

Sources: FAC (1992, 1993, 1994, 1995, 1996, 1997); IC (1992).

Overseas, recent new airport construction has occurred primarily in East Asia, with new airport facilities at Bangkok, Hong Kong, Kansai, Kuala Lumpur, Macau and Seoul. Airport construction in Europe and North America has been limited; new airports have been built in Denver and Munich, and additional airports are being developed in Athens and Oslo.

Data on traffic for Sydney and major airports in other countries are contained in Table 8.1. In 1994, Sydney's total passengers (including domestic passengers, comprising 75 per cent of all passengers) were about a third of those passing through Heathrow or Los Angeles Airports. By 1996–97, the total passengers passing through Sydney had increased from 17.5 million in 1994 to 21.9 million and international passengers had increased from 5.5 million in 1994 to 7.3 million (sub. 13, pp. 1, 8).

Table 8.1 Traffic at Sydney and selected overseas airports, 1994

<i>Airport</i>	<i>All traffic movements^a</i>	<i>Total passengers (embarked and disembarked)</i>	<i>International passengers (embarked and disembarked)</i>	<i>International freight (loaded and unloaded^b)</i>
	'000	'000	'000	'000 tonnes
Heathrow	411	51 368	44 262	954
Los Angeles	682	51 050	12 679	603
Sydney	na	17 483	5 493	385
Tokyo (Narita)	124	21 704	20 681	1 547
Vienna	143	7 521	7 159	81
Washington (Dulles)	268	11 561	2 689	75

na Not available

a An aircraft movement is either a landing or take-off.

b Sydney freight data relate to domestic and international freight.

Source: ICAO (1996b).

8.2 Existing operational constraints on airport access

Increasing congestion in the air, on runways and in terminals has developed where airport infrastructure has not kept pace with the growth in demand for air services. Kapur (1995) predicts that 33 major airports in North America, 13 in Europe and five in Asia will reach maximum capacity within the next 15 years and cites IATA estimates that the cost of aircraft delays¹ around the world is US\$15 billion to US\$20 billion per year (Kapur 1995). The Prices Surveillance Authority (1993) estimated that congestion at Sydney Airport cost passengers at least \$40 million per year. Congestion costs for airlines in the United States in 1986 were estimated at US\$2 billion (Hong and Harker 1992).

Participants in the Inquiry identified operational constraints at Sydney Airport, particularly the availability of landing and take-off slots at peak periods. Sydney Airport is understood to present more significant operational constraints than other major Australian airports. Qantas argued that an airport that is constrained in the preferred peak periods would have difficulty accommodating any substantial additional traffic created by further liberalisation. It identified the following operational constraints at Sydney Airport:

¹ The costs include those associated with aircraft in holding patterns, passengers' travel time, and communities located under flight paths.

- the introduction of a legislated aircraft movement cap;
- reductions in international flights permitted during the shoulder hours, leading up to and just after the 11 pm to 6 am curfew; and
- introduction of a Long Term Operating Plan which distributes traffic across Sydney (sub. 25, p. C12).

These measures have been introduced to control and reduce the impact of noise on Sydney. Sydney Airport acknowledged that these environmental restrictions limit capacity to below the technical capacity of the runways (sub. 13, p. 5).

Qantas noted that overall capacity limitation at Sydney Airport was a significant operational constraint:

We would say that when we look at driving Qantas forward, just speaking in relation to our business, that one of the biggest constraints on our business is Sydney's Kingsford-Smith Airport ... but if one wants to talk about inefficiencies and constraints and so on which are attempted to be solved by artificially restricting the demand, then that is probably the biggest issue of all (transcript, p. 451).

DIST emphasised that tourism growth depends on the provision of airport infrastructure keeping pace with demand and that Sydney is the preferred port of entry for the majority of international tourists. It noted that aircraft capacity at Sydney Airport is constrained by land availability, heavy use during peak periods and environmental concerns. It argued that:

As air services increase, access to Sydney will be largely determined by the availability of slots, as it already is at many other congested airports such as Narita in Japan. In anticipation of these constraints, Australia has been encouraging some airlines to serve other ports or imposing constraints on how Sydney is served eg. to be served only once in one direction ... The growing scarcity of slots ... reinforces the need for non-specification of gateways [that is, cities] and negotiation of sufficient capacity to allow carriers to serve a range of other ports if they are unable to obtain suitable slots at Sydney (sub. 31, p. 36).

Sydney Airport emphasised the need to increase international terminal gate capacity to handle the estimated 350 000 traffic movements at the airport by 2006 (compared with 275 000 in 1996–97) (transcript, p. 219). The number of international Boeing 747 terminal gates at Sydney will be increased to 34 before April 2000 from 24 in November 1997 (Sydney Airport unpublished).²

The focus of participants' comments related to Sydney Airport, but there were concerns about potential environmental constraints on access at other Australian airports. Ansett (sub. 19, p. 39) noted that community environmental concerns

² However, three smaller gates (one Boeing 767 and two Boeing 737) will be removed (Qantas, sub. 25, p. C14).

are not limited to Sydney and have been raised at other airports, especially Adelaide and Perth.

Over time, congestion will become an increasingly important aspect of international air services. Although many airports are expanding their capacity, there are also environmental and geographic constraints which will place some limits on available capacity. In these circumstances it is important to ensure that congested capacity is managed in the most efficient manner as well as to plan and build facilities to accommodate future growth.

8.3 Pricing at airports

Most international airports face increasing demand for their services. However, it is not possible to make incremental increases in capacity. Airport capacity is increased in large one-off amounts via ‘lumpy’ investments in new facilities, such as a new runway or terminal.

A pricing regime for airports should suit an environment of growing demand with periodic ‘lumpy’ investment. The central feature of such a pricing regime is that charges for the use of facilities should reflect their opportunity cost (the return forgone by using resources in their current form rather than in the most valuable alternative use). The available capacity would then be used by those who value it most highly.

The opportunity cost of an airline’s use of facilities varies with the level of demand relative to the airport’s capacity. When demand is low relative to capacity, the opportunity cost of an aircraft landing is low. However, as demand rises relative to capacity, the opportunity cost of an aircraft landing increases. For example, a light aircraft landing during the peak period may deprive a Boeing 747 of a landing slot, producing a high opportunity cost.

Thus an efficient pricing regime occurs when charges for the use of the airport reflect the changing opportunity cost as demand rises relative to the airport’s capacity. Such charges would begin low and increase over time as the airport becomes more congested and demand for limited resources increases. The opportunity cost of an aircraft’s use of facilities is lower in non-congested airports. In this case it is the long run marginal cost of maintaining the airport’s facilities.

At congested airports, efficient landing and take-off charges would reflect the cost of an aircraft movement to all other aircraft wishing to use the airport and to passengers. Reflecting congestion costs in charges to airport users would allow the airport owner to earn a surplus (after covering the physical costs of

providing the infrastructure) which could be used to fund additional ‘lumpy’ investment to alleviate congestion.

Prior to privatisation, the FAC used a uniform network charging system across all airports. Thus charges at any individual airport were not directly related to the costs of providing services at that airport (Box 8.2).

Box 8.2 Australia’s pre-privatisation pricing policy

The FAC’s pricing regime was determined by the need to recover the costs of aviation facilities fully. Prices had little relationship to the marginal cost of providing the services to airport users. They were set with the objective of recovering costs across all airports, without considering the individual circumstances of particular airports. The FAC achieved cost recovery of approximately 75 per cent (across all its airports) on its estimate of aeronautical costs. This under-recovery was offset by the profitability of the Corporation’s non-aeronautical activities.

Source: IC (1992).

Following privatisation, network pricing has ceased, increasing the scope for efficient charging. Landing fees at most airports, for example, are now based on an aircraft’s maximum take-off weight. Weight based fees are more efficient to the extent that they account more accurately for some airport costs, such as costs associated with runway damage caused by aircraft of different weight.

8.3.1 Efficient pricing during peak periods

Some airports may be congested at peak periods only. The opportunity cost of aircraft movements is relatively low in non-peak times but may be significant in peak periods when demand outstrips the airport’s capacity.

Peak load pricing — charging a higher price in peak periods to reflect the additional costs of congestion to other airport users — is an efficient system of pricing in such circumstances. Such pricing may take the form of a peak surcharge in addition to the non-peak period charge.

Peak load pricing should provide an efficient solution to rationing capacity — that is, capacity is allocated to airlines that place the highest value on using the airport at peak periods. Airlines that place a lower value on airport use at peak periods can move to off-peak periods, terminate less valued services, consider alternative airports, or use larger planes at peak times.

The pricing differential between peak and non-peak periods depends not only on the peak surcharge but also on non-peak charges. A small difference in peak

and non-peak charges together with excess demand at peak hours, does not necessarily mean that the peak surcharge is too low. It may imply that non-peak charges are too high — it is the differential that matters.

Peak load pricing can easily accommodate a ‘regional ring fence’ (which preserves a proportion of slots for regional airlines), as it is possible to charge a different peak load charge for regional airlines.

Sydney Airport introduced peak period landing and take-off charges in 1991. The peak surcharge was \$250 per landing and take-off and the shoulder surcharge (for the period leading up to, and just after the peak period) was \$200 per landing or \$100 per take-off (sub. 13, attach. E). These charges applied to all fixed wing aircraft, irrespective of size.

One of the objectives of the charges was to discourage airport use by general aviation at peak times. Sydney Airport considered the charge to be successful:

... in that there was some spreading of the peak into the shoulder hours and the period before and after the shoulders plus the virtual elimination of General Aviation movements in the peak (sub. 13, p. 8).

The peak period surcharge has had a significant impact on general landing charges for smaller aircraft at Sydney Airport (Table 8.2). The surcharge was a fixed fee per landing or take-off, whereas general landing charges varied according to the maximum take-off weight of the aircraft. Thus, the surcharge represented a greater impost for smaller aircraft. For example, the peak surcharge represented a 210 per cent increase in landing fees (compared to non-peak fees) for a Fokker F27–500, and an over 900 per cent increase in landing fees for a Cessna 210. By contrast, the increase was approximately 70 per cent for a Boeing 737–400 and only 11 per cent for a Boeing 747–400.

Despite some success, demand for peak period slots remained high. Unsatisfied demand at peak times suggests that the price differential between peak and off peak may have been insufficient to spread demand to levels that Sydney Airport could accommodate — the differential could be raised by lowering the general landing charge or increasing the peak period surcharge.

Table 8.2 Landing charges, including peak period surcharge, for selected aircraft at Sydney Airport^a

<i>Aircraft type</i>	<i>General landing charge^b</i>	<i>Peak period surcharge^c</i>	<i>Increase in landing charges when surcharge applies</i>
	\$	\$	%
B747-400 (397 seats)	2 271	250	11
B737-400 (137 seats)	359	250	70
Fokker F27-500 (52 seats)	119	250	210
Saab 340A (34 seats)	73	250	342
Cessna 210 (5 seats)	28	250	909

a Peak period surcharges have applied since 1991. From 1 October 1998, these charges will be withdrawn.

b General landing charges: \$5.72 per tonne maximum take-off weight with a minimum charge per landing of \$28.

c Surcharge applies per take-off or landing. The peak periods are between 8-9 am and 6-7 pm.

Sources: BTCE (1997); Sydney Airport (sub. 13, attach. E).

8.3.2 Proposed changes in airport charges at Sydney Airport

Charges for aeronautical services at Sydney Airport were restructured on 30 June 1998 and will be implemented on 1 October 1998 (Table 8.3). The restructuring involves a reduction in the basic landing charge for use of runways and taxiways, an increase in the minimum landing charge, and an increase in the international terminal charge. The FAC claimed that the increase in the minimum landing charge will more appropriately reflect the Corporation's cost of provision of basic runway and taxiway facilities and services. The changes will be phased in over four years for regional airlines.

The international terminal charge will more than double to meet the cost of the capital expenditure program, estimated to be \$700 million (ACCC 1998c). Peak landing or take-off charges will be withdrawn. With the commencement on 29 March 1998 of the new slot management scheme (Section 8.4), the Corporation concluded that:

Having considered the industry's views, the Corporation believes that while the slot management regime may still be in its early operational state, that alone is not sufficient to justify retention of peak charges in tandem with slot management where the latter basically manages airport access during peak demand periods (FAC 1998, p. 6).

Table 8.3 Charges at Sydney Airport

<i>Charge</i>	<i>As at 5 March 1998</i>	<i>From 1 October 1998</i>
	\$	\$
Basic landing charge	5.72 per tonne MTOW ^a	2.92 per tonne MTOW ^a
Additional peak landing or take-off charge	250	na
Shoulder landing or take-off charge	200	na
Minimum landing charge	28	100
International terminal charge	2.48 per tonne MTOW ^a	7.92 per tonne MTOW ^a

a Maximum take-off weight

na Not applicable.

Source: FAC proposed Determination 13.

The restructured charges will change the cost of landing a Boeing 747–400 and using the international terminal from \$3254 (\$3504 in peak periods) to \$4303.

A comparison of landing charges for Boeing 747 aircraft (but not including terminal charges) at selected international airports including Frankfurt, Singapore, Tokyo and Osaka, indicates that Sydney's charges are relatively low. Data availability has precluded a full comparison of charges.

While the restructured charges at Sydney Airport will more closely align prices with the cost of providing landing and international terminal facilities, they are not attuned to allocating scarce capacity efficiently and providing incentives for increased investment when overall capacity limits are approached. The decision to abandon peak pricing rather than improve it could seriously compromise the gains from the restructuring of charges.

A peak period surcharge provides important incentives to ensure appropriate investment in airport infrastructure. In addition to allocating airport infrastructure more efficiently, peak load pricing also provides a mechanism for providing revenue for expanding airport infrastructure.

If peak load pricing is unable to provide the correct price signals to airport operators, there is the risk that airports may over-invest in airport facilities which are underutilised at off-peak times, even though some peak load could be spread to the off peak. As Westralia Airports Corporation argued, demand during peaks often drives airport capacity expansion plans:

Perth International Airport, like other busy Australian airports, experiences peak periods during the day primarily due to global connection schedules between interim connection hubs in Asia and destinations in Europe and North America. In Perth, peak hour requirements alone drive terminal expansion plans. Westralia

Airports Corporation believes that peak load pricing should be implemented where appropriate (sub. 59, p. 4).

Qantas did not favour peak period pricing of airport facilities. It noted that providing more airport facilities in response to increased demand for these facilities was more important than managing the congestion which is created by a shortage of facilities (transcript, p. 466).

The Commission is of the view that an efficient pricing structure would address both overall capacity and the allocation of that capacity.

8.3.3 Constraints on pricing

A range of factors may inhibit the adoption of an efficient pricing regime for airport services. The nature of international airline scheduling periods implies that there are 'windows of scheduling opportunities' available to airlines, so that peak load pricing could lead to very high landing and take-off charges at some times (Krolke 1997). Further, political factors in many countries constrain the use of peak load pricing to the extent necessary to reduce demand to a level consistent with capacity. In addition the 'natural monopoly' characteristics of airports invite government constraints on the pricing discretion of airport owners.

Airport operators may have some scope to use monopoly power in their pricing. The Commonwealth Government has sought to ensure that the sale of airports does not facilitate the abuse of market power by private airport operators, by establishing a transitional regulatory regime which operates for five years after an airport is sold. The potential for such abuse is most likely to arise in charging for aeronautical services such as landing aircraft. Aeronautical charges have been capped at privatised airports. The price caps for the privatised airports allow airports to raise average aeronautical charges by Consumer Price Index minus X. The improvement in productivity (the X) that the government considers can be achieved in aeronautical services varies across airports — 4 per cent for Melbourne, 4.5 per cent for Brisbane and 5.5 per cent at Perth (Fahey and Sharp 1997). In addition, service quality will be monitored. Aeronautical charges at Sydney Airport are subject to prices surveillance by the ACCC. The airport will not be subject to a CPI minus X price cap (Costello 1998).

However, a price cap can compound an inefficient aeronautical charging structure — in the form of under-pricing — that existed prior to the implementation of the price cap. While prices surveillance and monitoring are intended to ensure that private airports do not abuse their market power, it is important to recognise that:

- surveillance and monitoring can be demanding forms of regulation;
- information problems and the range of strategies that can be employed by airport operators mean that surveillance and monitoring are not precise;
- surveillance and monitoring invariably involve trade-offs between quality-enhancing investments and costs, where quality-enhancing investments increase costs that cannot necessarily be recouped through higher (permitted) prices; and
- price-capped airports may be constrained in their ability to use pricing strategies to solve congestion problems in the manner discussed above.

The first tranche of privatised airports will complete their five-year transitional period by July 2002. The Government has stipulated that the prices oversight arrangements will be reviewed prior to the conclusion of the transitional period.

8.4 Slot management

A slot is the right to schedule an aircraft arrival or departure, on a specified day within a specified time frame. The number of slots available at an airport in a given period is constrained by runway capacity. Congestion arises when demand for access to slots in order to take-off or land exceeds capacity. Slots can be allocated by administrative or market based techniques (or a combination of both).

Over 100 airports throughout the world have established airport scheduling committees to allocate landing and take-off slots. Airport authorities inform the committee of the maximum number of landing and take-off slots available for allocation among the airlines. Most scheduling committees operate under rules set by the International Air Transport Association (IATA) (Box 8.3).

Because of capacity constraints, not all airlines receive all the slots they need at the times required to make up their schedules. A system of swapping or non-monetary trading of slots has evolved. Trading is organised administratively at IATA scheduling conferences, when airlines are able to see the planned schedules of other airlines and their slots. The conferences provide the opportunity for airlines to obtain the required slots to make up their planned schedules. They are held every six months, but trading in slots can also occur on an informal basis between conferences.

Box 8.3 Scheduling rules

Most airport scheduling committees operate under the IATA general rules for scheduling slots. These rules include:

- ‘grandfathering’ — an airline with a particular slot in the last period retains it in this period;
- use-it-or-lose-it — if an airline uses its particular slot for less time than that specified, the slot will be made available to other airlines in the next period;
- any slots which become available from increased capacity or by carriers relinquishing slots are distributed equally between new entrants and existing operators;
- priority for regular services — given competing demand an available slot will be allocated to the service that plans to use it most frequently; and
- directed discretion — there are guidelines for precedence if demands remain unmet. Rescheduling to accommodate larger aircraft has precedence over extending an existing schedule to provide a year round service.

Source: Jones and Viehoff (1993).

Slots are usually exchanged for those with similar operating characteristics — for example similar aircraft sizes. However, with the approval of the relevant airport scheduling committees, it may be possible to change the characteristics of a particular slot.

Sydney Airport introduced a formal slot management system in 1998. The Commonwealth Minister for Transport has appointed a company responsible for slot management (currently Airport Coordination Australia) and the process for allocating slots is specified under the *Sydney Airport Demand Management Act 1997*. The slot allocation scheme operates in conjunction with a movement limitation scheme (a cap of 80 movements per hour during the operating period outside the curfew, seven days a week) and is based on the IATA rules.

8.4.1 Concerns with current slot management processes

The current administrative system of allocating slots entrenches the position of incumbent airlines at airports. DTRD noted that:

The inability of the committee based slot allocation process to provide adequate provision for new entrants is a fundamental weakness of the system. However, there has been no mechanism adopted internationally which satisfactorily or equitably addresses this issue. The US has sparingly used forced sacrifice to free up slots for international services ... Forced sacrifice would create a range of administrative and legal problems (1997d, p. 4).

‘Grandfathering’ provisions ensure that the peak time slots held by incumbents are generally not made available to new entrants. The issue of slot availability

particularly concerns new entrant airlines. An executive from Virgin Atlantic argued that:

The costs for the travelling public of maintaining grandfather rights are huge. These costs represent a direct subsidy from consumers to those dominant airlines fortunate enough to have acquired slot holdings in the past as gifts from their government-owners. That should be unacceptable in a free market (Humphreys, 1997, p. 3).

While increasing flexibility for incumbent airlines, slot trading under IATA rules allows only limited entry by new airlines. There are some provisions for new airlines, any slots which become available from increased capacity or relinquished slots being distributed between incumbents and new operators. However, as the number of slots becoming available in part depends upon carriers relinquishing slots, few peak period slots are allocated to new entrants. The IATA use-it-or-lose-it rule (which requires that a slot be used 85 per cent of the time in the previous season) may increase the number of slots available for allocation, but the likelihood of incumbent operators not utilising peak period slots is small. For example, up to 80 per cent of slots (including grandfathering) at congested airports in Europe have been reassigned to previous users at every scheduling conference (BTCE 1994).

Grandfathering entrenches the dominant airline at an airport. This issue was raised by the European Union Competition Directorate which ruled that British Airways and American Airlines be allowed to merge their operations only if they give up to competitors 267 take-off and landing slots at Heathrow and Gatwick Airports. Slots are to be allocated to the airlines competing with British Airways and American Airlines by the committee responsible for slot allocation at the airports. This allocation is aimed at ensuring the development of competition in the relevant markets (EC 1998).

The grandfathering process, which in effect grants slots in perpetuity, created some expectation that British Airways may have a right to compensation for slots lost. It has been suggested in some quarters that the two airlines should be entitled to receive compensation from the government to recoup the value of their slots (*The Economist* 1998).

8.4.2 Formal and informal slot markets

New entrants have acquired desirable slots in some airports by obtaining an undesirable slot time in an allocation and exchanging it with an incumbent airline, together with an under-the-table payment. Jones and Viehoff (1993) noted that there was some anecdotal evidence of money changing hands when slots were traded. Some participants also described such trading to the

Commission. FedEx is reported to be negotiating for the sale of slots at Narita Airport to other US airlines following the 1998 US–Japan ASA (transcript, p. 83). European airlines have objected to the market being closed to non-US airlines.

It is possible that ‘under-the-table’ selling could develop at constrained airports in Australia where formal selling is not permitted — allowing explicit selling instead would permit the development of a more efficient market. Indeed, if capacity is not expanded and if peak load pricing is not used to spread demand, it can be argued that the question is not whether a market in slots will develop but whether the market will be above or under the table.

The International Chamber of Commerce argued that:

Since it is likely that when an airport is very congested, secondary trading will take place, such trading should be at market prices and the process should be transparent to the public (1994, p. 21).

The creation of a formal secondary slot market could result in more flexible slot allocation procedures. A secondary cash market for slots (replacing the current informal trading arrangements) would permit a market value to be placed on a slot — that is, the price of the slot would reflect demand for the slot. An airline could purchase a slot if its valuation of that slot exceeded the market price. Slots would be acquired by those who valued them most. Several inquiry participants supported the introduction of such a system. FedEx argued that a market-based approach to slot trading would ensure an efficient allocation of slots (transcript, p. 83).

Developing a slot market

A factor in the development of a market for slots is the nature of the property right being offered. The airlines do not formally ‘own’ their slots although ‘grandfathering’ rules provide some degree of certainty as to the slots they will hold in the future.

Legally, there is uncertainty concerning the ownership of landing and take-off slots. For example, in the United States slots are ‘an operating privilege’ under the control of the Federal Aviation Authority which may withdraw slots to allocate them to essential air services or international flights. They are also regarded as an asset to the extent that banks have accepted them as mortgage security (Starkie 1994).

DTRD argued that the Commonwealth Government may be liable for compensation if slots which were purchased could not be used because of operating constraints at airports (transcript, p. 416).

Several participants commented about the uncertainty surrounding the ownership of landing and take-off slots. Ansett argued that slots should belong to countries not airlines (transcript, p. 192). FedEx noted that slots, while a sovereign right to be allocated by government bodies, have been regarded as proprietary rights and leased and sold (transcript, p. 83). Furthermore, the privatisation of airports means that slots could belong to the airports (at least for the duration of their leases) rather than to governments.

The nature of the rights conferred by owning a slot is unclear. It is impossible to guarantee that an aircraft will be able to land at a precise time, even if it has a slot. A range of factors such as weather conditions and other traffic can disturb schedules, though contracts could be designed to accommodate such events.

While this uncertainty may make it difficult to specify property rights, the prices offered for slots would reflect the uncertainty. This uncertainty has not prevented the development of informal markets and under-the-table payments, as noted above. Indeed it can be argued that one advantage of developing a formal slot market is that there would need to be a clear specification of the property rights of a slot, of the obligations of each party to the contract, and hence of the distribution of risks between them.

Some smaller airlines have expressed concern that large incumbent airlines would dominate slot markets. Ansett indicated that a market for slots would pose significant problems because it would be outbid by large, established and profitable airlines (transcript, p. 191). Such outbidding could reflect efficient bidding and pricing, or it could reflect the exercise of monopoly power which would disadvantage consumers.

Other problems arise with slot auctioning generally. Airlines require a parcel of slots to land and take-off at a network of airports as part of their scheduled service. However, the auctions would typically sell slots airport-by-airport and not as parcels of slots at different airports. This may make schedule planning and slot selection complex because airlines may not be able to value a slot until they know what other slots they have secured at other airports. But this problem would not be so important if existing slots are 'grandfathered'.

As a starting point for a slot market at Sydney Airport, the airport scheduling committee (or some other body established for the purpose) could auction new slots or those made available through airport expansion, technological improvements, regulatory changes, airlines discontinuing services, or the freeing up of slots through the use-it-or-lose-it rules. This approach has the advantage of allowing new entrants to bid.

The scope for new entrants to obtain slots would be widened further if the auction extended to all (or some proportion of) slots currently held by

incumbent airlines. This approach would require the relaxation of the 'grandfather' rights currently enjoyed by incumbent airlines.

Another approach may be to 'churn' slots, selling a small proportion of currently 'grandfathered' slots through a general auction (or a tender process) each year. The number of slots offered through auction would increase over time. But the problem of determining which slots should be churned — and the sequence, if all slots are to be churned over time — hampers the adoption of this approach.

Independent of the primary market for slots, a secondary market could operate. This involves the trading of slots once they have been transferred to airlines.

Despite the perceived advantages, formal markets for slots do not operate in Australia or in most overseas countries. Since 1986, a recognised formal market has operated at four US airports — O'Hare (Chicago), J. F. Kennedy (New York), La Guardia (New York) and Ronald Reagan National (Washington DC) — but is limited to slots for domestic flights. Under the new Canada–US ASA, Canadian airlines may also participate in these markets. Slots are traded through a clearing house although financial terms are generally not made public. The number of outright slot sales in the United States seems to be relatively small. Incumbent airlines tend to hold on to their slots although they are increasingly leasing slots to other airlines (Starkie 1994). Thus incumbents may maintain their dominance of the market while allowing some limited new entry.

The European Commission is currently drafting rules in relation to the management of slots which may include provisions for some form of auctioning or secondary market. The details are still being developed.

Regional airline slots

Many airports around the world restrict the trading of slots held by regional airlines. Sydney Airport is required by the Government to hold up to 30 per cent of the airport's peak capacity for regional airline operators — this is known as the 'regional ring fence'. Slots held by regional airlines at Sydney Airport cannot be traded for other categories of operation — that is, they cannot be swapped with a non-regional domestic or international service. The New South Wales Government stated:

Access to Sydney Airport for regional airlines is a major concern for regional development interests in New South Wales. It is critically important for regional development that regional business people, in particular, have ready, low cost access to Sydney, and this means access in peak hours (sub. 81, p. 2).

A move to a market in slots would not be incompatible with a ‘regional ring fence’. Two types of slots could be traded, regional and non-regional, each with its own market and prices.

However, the ‘regional ring fence’ limits the scope for additional entry of domestic and international flights in peak periods. Sydney Airport argued that:

If market forces could operate to allow the economic use of the runway system these slots would be swapped or traded for international or domestic flights. The regional slot provision or ‘regional ring fence’ limits growth of international services in the peak ... (sub. 13, p. 6).

8.5 Promoting competition in airport services

The terms of access to airport infrastructure are vital to the efficiency and competitiveness of air services, both domestic and international. These services are often provided on a monopolistic basis (OECD 1997). Monopoly provision of airport services may not only increase the costs of user airlines, but where the monopoly provider is an airline, it may provide a hidden subsidy to that airline.

A number of participants raised the problem of competitive access to airport infrastructure. Qantas argued that:

In the international airline markets, a number of major non-regulatory barriers to entry exist. Primary among these is a scarcity of airport capacity, either in terms of take-off/landing slots, or access to other facilities. Other issues concern monopoly provision of ground handling services (with the monopoly often held by a foreign competitor), lack of enforcement (or applicability, or existence) of competition law at the foreign end of routes from Australia, and monopoly provision of distribution services in foreign countries ... (sub. 25, p. 35).

Ansett took the view that:

Access to airport infrastructure for international air services depends on the physical capacity of an airport’s system ... regulatory arrangements on the use of these facilities...the charging regime applicable to the use of these facilities and the availability of commercial arrangements such as competitive ground handling. Overall, these arrangements, in Australia (even at capacity constrained Sydney) enable the operation of market forces. However, this is not the case in all foreign markets served by Australian carriers (sub. 19, p. 38).

Article 15 of the Chicago Convention, which relates to airport and similar charges, requires that airports in contracting states be open under uniform conditions to the aircraft of all other contracting states. It also requires that charges that are imposed for the use of such airports should not be higher than those paid by the national carrier. Most of Australia’s ASAs include an article relating to airport services and facility charges that reflects these requirements.

8.5.1 Ground handling and other ‘soft rights’

Ground handling is an important aspect of international air services operations that affects market access. Some policy guidance on ground handling is provided in Annex 9 of the Chicago Convention, but there is limited treatment of ground handling in bilateral air service agreements. Annex 9 recommends that operators be offered the choice of providing their own services for ground handling operations, or having such operations performed by another operator, or by the airport operator, or by an agent approved by the airport authority.

The ICAO Secretariat took the view that uniform regulatory treatment of ground handling is necessary in order to provide all carriers with the same opportunities to utilise market access rights effectively. The Secretariat presented a proposal for ground handling arrangements at the 1994 Air Transport Conference, under which parties would authorise foreign carriers to:

- perform their own ground handling services;
- handle another or other air carrier(s);
- join with others in forming a service providing entity; and /or
- select among competing service providers (at each designated carrier’s choice).

Under this proposal, carriers would have been able to choose freely among these alternatives, constrained only by the relevant safety provisions or the scale of airport operations being too small to sustain competitive providers.

However, the Conference took no action as most States were satisfied that the existing ground handling arrangements at their international airport(s) could meet their specific needs. Many delegates expressed the view that, while foreign carriers could provide air services to and from their territory, they should not be permitted to carry out ground handling services. Some States indicated that they intended to continue the present practice of having the national carrier or in some cases the airport operator, provide ground handling. There was some support for using a code of conduct based on reciprocity to resolve unfair competitive situations arising from the provision of ground services by a monopoly (ICAO 1994, p. 41).

Qantas argued that under the current bilateral system, Australia was able to influence the conditions of competition in foreign markets and that:

This is particularly true in breaking down non-tariff barriers in areas such as access to infrastructure, monopolistic ground handling provisions, and in other so-called ‘soft rights’ (sub. 25, p. 43).

Australian ASAs vary in their treatment of ‘soft rights’ such as ground handling. Most ASAs are silent on the matter. Some, such as those with the United States and United Kingdom, allow airlines to perform their own ground handling, while some specifically restrict this option. For example, the Australia–Hong Kong ASA stipulates that airlines designated by Australia are not able to provide their own ground handling services in Hong Kong, but it does not apply the reciprocal condition that the designated airlines of Hong Kong cannot perform their own ground handling in Australia.

Despite Qantas’ optimism about the potential of ASAs to achieve competitive outcomes for airport services such as ground handling, the record to date is not encouraging. Australia should work with other countries to encourage greater competition in ground handling services and to that end should seek provision for competition in ground handling and other airport services in its ASAs.

8.5.2 Promoting competitive services at Australian airports

Access to the services of essential facilities can be an important precursor to encouraging competition in related markets, and the economically efficient use of resources. If, for example, ground services are provided by only one firm, and that firm also operates aircraft, the benefits of competition in air transport services might be offset by the terms and conditions on which ground services are supplied. Even where the terms and conditions are non-discriminatory, the benefits of competition might be captured through high profits accruing to the monopoly provider of ground services.

The benefits of greater competition among airport service providers include lower cost and higher quality services to airlines and their passengers, and improved international competitiveness of Australian airports. This will enhance Australia as a tourist destination and a place for airlines to do business (for example, as a place to undertake aircraft maintenance).

Many countries have no provision for mandatory access to the services of essential facilities at airports. In contrast, in Australia there are two ways in which airport services may be declared for the purpose of providing access for third parties. A general industry regime is set out in Part IIIA of the *Trade Practices Act 1974*³, and an industry specific regime is set out in Section 192 of

³ Part IIIA of the Trade Practices Act provides a general access regime under which third parties can seek access to the services of essential facilities. These parties must apply to the National Competition Council (NCC) for a service to be declared, and the NCC must make recommendations to the relevant Minister. The Minister may subsequently declare the service or not declare the service. One reason for not declaring a service would be if an effective regime was already in place or the owner had given an undertaking, acceptable to

the *Airports Act 1996*. In addition to access regulation, provision exists in the *Prices Surveillance Act 1983* for price monitoring and surveillance.

While the intent of these regulatory regimes is to encourage competition and economic efficiency, it was apparent to the Commission that considerable confusion exists among airport users and service providers over their application and consistency. This has been heightened by the possibility that both airport access regimes may apply to the same airport. Currently the Airports Act regime applies to the three major privatised airports — Melbourne, Perth and Brisbane — but there is provision for the Minister for Transport and Regional Development to extend its coverage to other airports including Sydney. The Part IIIA regime for declaration applies potentially to all airports and airport services, as it does for industry generally.

The first, and to date only, access declaration concerning airport services in Australia was made under the Part IIIA provisions (Australian Cargo Terminal Operators (NCC 1997)). The declaration covered certain services at Melbourne and Sydney airports. The Melbourne declaration expired at the end of June 1998, at which time it was intended that airport services would be declared under the Airports Act. The Sydney declaration still stands.

Where the two regimes differ is in the routes they take to declaring the services of essential facilities. They are the same from that point on. These two paths however have created considerable concern over the potential coverage of airport services. This has been aggravated by the use of different selection criteria⁴, and different regulators.

Not only are the criteria for declaration under the two Acts slightly different, but the processes and personnel are as well. The Trade Practices Act declaration

the ACCC, to provide access on stated conditions. If it is declared, the third party and the owner of the essential facility must enter into negotiations. This is backed by avenues for arbitration and appeal.

⁴ The ACCC may decide if a service is declared on the basis of whether or not it is necessary for the purposes of operating and/or maintaining civil aviation services at the airport, and is provided by means of significant facilities at the airport, being facilities that cannot be economically duplicated (Airports Act, sub section 192(5)). Part IIIA uses more exhaustive criteria, and potentially applies to a narrower set of services. The important exception to this is that Part IIIA will apply if it is 'uneconomical ... to develop another facility', which is a potentially weaker test than the Airports Act test of economic duplication. However, in other respects the Airports Act uses other much weaker tests. For example, it contains no requirement that access promote competition in related markets, and while the facility must be uneconomic to duplicate, it need not be nationally significant. In addition, recent amendments to the Airports Act (subsections 192(4A) to 192(4D)) appear to give the ACCC even more discretion in deciding which airport services should be covered by Section 192(2).

process is triggered when a business applies to the National Competition Council (NCC) seeking a declaration recommendation for a service. The NCC is required to assess declaration applications and make a recommendation to the Treasurer who must then publish reasons for any subsequent decision.

The Airports Act, on the other hand, requires first that the Minister for Transport and Regional Development determine which airports are to be subjected to the declaration process, and second that the ACCC decide which services should be declared. The ACCC is not required to publish the reasons for its decision. The NCC is not involved.

The Airports Act also stipulates that the three main privatised airports would all be ‘declared’ airports if adequate undertakings were not in place 12 months after their sale. Undertakings were either not given or not accepted, so the Minister for Transport and Regional Development ‘declared’ all three airports in July 1998. However, there has been no specific indication subsequently from the ACCC of which services might be declared. By effectively declaring an airport and its services without defining those services, the Airports Act process makes a presumption in favour of declaration.

The use of different criteria and processes raises the prospect that non-essential facilities will be declared, increases uncertainty about expected returns and deters investment in airport facilities. This could be detrimental to competition and economic efficiency in the airport sector.

Furthermore, mandatory access may not always be the right regulatory instrument to apply to airport services. There are good reasons for being concerned about the supply of airport services by organisations operating essential facilities which are vertically integrated into other upstream or downstream markets. But where airport operators act as landlords they have no incentive to turn away customers. Airport operators would have an incentive to encourage more, rather than fewer, service providers to locate on the airport, to increase their rental income and provide better services to their airline customers. In such circumstances the concern is not about whether the airport operators will provide access — it is in their commercial interest to do so. If market power is of concern, the Prices Surveillance Act could be a more appropriate regulatory instrument.

Overall, the Airports Act access provisions are not consistent with the principles in the Trade Practices Act, and are potentially highly interventionist. Furthermore, they overlap to some extent with the prices surveillance regime which imposes regulatory controls on charges for ‘aeronautical services’, but not on charges for other services. While access regimes may be necessary, the burden imposed by such regimes requires that their application be kept to a

minimum. The Commission considers that the Airports Act declaration provisions should be reviewed.

8.6 Conclusions

Improving the efficiency and competitiveness of airports is central to realising the full benefits of liberalising international air services. Greater demand for airport services will increase congestion at major Australian airports. Making the best use of the available infrastructure, and providing appropriate signals for new investment are vital to maintaining an efficient and healthy aviation industry in Australia.

Ensuring competitive access to, and efficient pricing of, airport infrastructure is required. Consideration needs to be given to the benefits and costs of peak load pricing and developing a market for airport slots as means of managing demand for airport services where congestion occurs. The Government has already foreshadowed a review of price regulation to be completed by 30 June 2002. The Commission considers that this review should be widened to take into account the issues concerning airport access and pricing raised in this inquiry. As these considerations go well beyond the ambit of the ACCC, the proposed inquiry should be conducted by an independent body, follow transparent processes and be open to public participation. Such an inquiry could also be undertaken in conjunction with the legislative review of the Airports Act. A specific date has not been set for this review but given the importance of the issues involved it should occur sooner rather than later. A review in 2001 would be appropriate.

Recommendation 8.1

The Commonwealth Government should commission an inquiry into airport capacity, access and pricing in 2001. Such an inquiry should, at a minimum, examine:

- constraints that airports are imposing on Australia's air services;
- peak load pricing;
- regulation of aeronautical charges;
- the potential for the introduction of a market for slots; and
- legislated access provisions.

9 CONCLUSIONS: TOWARDS FURTHER LIBERALISATION

The constraints on competition and trade in the bilateral regulation of international air services have significant, largely adverse, effects on airlines, users and the economy. The introduction of greater competition has led to substantial economic welfare gains, not just in Australia, but also overseas. On balance, liberalisation of trade and investment in international air services is likely to bring substantial benefits to consumers, tourism and other industries reliant on international aviation as well as efficient airlines.

The Government has asked the Commission in this inquiry to develop and assess options for greater liberalisation both within and outside the bilateral system. This chapter sets out the major options considered and recommendations proposed by the Commission for further liberalisation of Australia's ASAs. Recommendations relating to departmental processes, the IASC and airports are contained in Chapters 5, 7 and 8, respectively.

9.1 The liberalisation agenda

Looking increasingly antiquated, the bilateral system is coming under intense pressure. These pressures include:

- strong growth in air services globally and in Australia;
- deregulation of many domestic air services;
- growing consumer and business demands for better, seamless air services;
- the use of codesharing, charters and alliances to overcome constraints inherent in the bilateral structure;
- US driven bilateral 'open skies' policy;
- low profits of most airlines and growing reluctance of governments to continue subsidising their airlines;
- privatisation of airports and airlines;
- global capital markets and the pressure they apply to both publicly and privately owned airlines to perform; and
- emergence of a number of regional or plurilateral agreements, particularly developments in the European Union.

In addition, world trade in most other goods and services is increasingly being liberalised in a multilateral framework. This is producing demonstrable gains to economic welfare, and making it difficult to justify a different system for international air services. The APEC commitment to achieve free and open trade and investment for industrialised economies by 2010, and for developing economies by 2020, may also have important implications for regulating international air services. Removing restrictions on trade and investment conflicts with existing ownership and effective control restrictions which lie at the heart of the bilateral system of national designation.

Despite these pressures, the bilateral system has proven to be quite resilient. While this report has focused mainly on economic issues, the bilateral system also incorporates technical regulation relating to international aviation procedures, safety and security. The bilateral system can accommodate more liberal economic regulatory arrangements. Liberalisation of such constraints does not imply relaxation of technical and safety regulation of international air services.

Although Australia has been liberalising its ASAs, the process inherently takes time and is piecemeal. Pressure will continue to mount from the global push for more liberal aviation agreements. Spurred by the United States, bilateral, reciprocal, 'open skies' agreements are spreading. If Australia does not move rapidly, the rest of the world could liberalise around it. Australia would be disadvantaged if air transport services between other countries become more efficient relative to air transport to and from Australia. And Australian carriers would be disadvantaged in their pursuit of new and larger international markets if other markets liberalised ahead of ours.

Further liberalisation of Australia's international air services sector could include unilateral, bilateral, plurilateral and multilateral approaches.¹

Before considering options, it is important to clarify the objectives of international air services regulation. The main economic objective for Australia is to develop the full potential of trade in international air services to enhance Australian economic welfare by:

¹ There would appear to be no particular problems in establishing a plurilateral or multilateral agreement which is consistent with the Chicago Convention. Market access is governed by several Articles in the Chicago Convention the most important being Article 6, which requires: "... special permission or other authorization" of a contracting state in order for a scheduled international air service to operate into that State. But ICAO has noted that: "... the Article does not specify the process by which that permission or its terms may be given: permission could be exchanged bilaterally or multilaterally or even granted unilaterally" (ICAO 1994, p. 2).

- enabling access to an efficient, internationally competitive airline industry;
- promoting the interests of Australian consumers and other users of international air services; and
- improving the efficiency with which resources are used in other parts of the aviation industry, such as airports and government administration.

In addition, there may be equity and regional objectives that can be achieved through greater access to international air services at lower prices.

9.2 International production and trade in air services

The main differences between regulation of international trade in air services and trade in most other goods and services (Chapter 3) include:

- bilateral aviation-specific (rather than multilateral multi-product) agreements govern most aviation relations;
- trade is prohibited unless various ‘freedoms of the air’ are invoked under specified conditions in bilateral ASAs; and
- most aspects of trade in air services do not come under the rules of the World Trade Organization (WTO); far from treating bilateral treaties as exceptions to the general WTO rule of non-discrimination, bilateral arrangements are the essence of the rules of international aviation.

As a result, there are significant differences between production and trade in international air services compared with production and trade in most other goods and services. It is necessary to recognise these differences when examining options for further liberalisation.

9.2.1 Nature of production and trade in international air services

Each city origin and destination pair for air services can be considered a separate ‘product’ with limited substitution possibilities with other city pairs. These products are geographically differentiated and not homogeneous. Further, the characteristics of production in the airline industry (Chapter 6) mean that few routes are likely to be served by a large number of airlines, even in the absence of formal restrictions contained in the bilateral system. Small group oligopolies, duopolies or even monopolies are likely to predominate (particularly on Australia’s long thin routes) and the costs of entry can be significant.

One country alone cannot produce international air services. An international flight requires inputs from both the origin and destination countries in the form

of infrastructure and rights to exercise various freedoms of the air (such as rights to embark and disembark passengers and freight, and to take-off and land). This means that at least two countries must agree to produce an international air service. Governments exercising control over their own airspace are able to specify conditions under which production may occur. This is in contrast with goods and most other services markets whereby a country is generally free to produce whatever it likes on a unilateral basis.

For most countries, the production of particular goods and services is small relative to worldwide output. Producers assume they will be able to export freely if they can produce at or below the world price. However, whether it is possible to export what they produce will depend on the trade policies of other countries.

Freedom to produce and trade does not apply in international aviation. Given the bilateral nature of production of any particular international flight, each origin and destination country has power to veto production. Without agreement, one country's airline cannot produce international services even for the country's own citizens, regardless of its relative efficiency.

International air services do not necessarily involve an export or import. If the airline and its passengers are all residents of the same country, in economic terms, the flight can be considered to be an internal domestic activity rather than an international trade. That is, the flight is more like a temporary extension of the nation's boundary. An export of the service only occurs if an airline carries passengers or freight from another country, while an import only occurs if a resident of one country uses another country's airline. The international trade context is not apparent from the flight itself.

Thus, Australia exports air services when foreigners fly Qantas or Ansett. But Australians flying Australian airlines internationally are not involved in international trade at all. Any particular Qantas or Ansett flight to or from Australia is likely to produce both non-traded and export services, while the carriage of Australian passengers on a Singapore Airlines flight on the same route is an import of air services by Australians.

The bilateral relationships which have evolved for international air services, mean that each bilateral partner has considerable bargaining power. Each country can determine the size of the total supply to the bilateral market, not just its own level of output. Such market power is equivalent to the 'terms of trade' effect in international goods trade. Australia rarely possesses enough influence in world trade to enjoy bargaining power of such magnitude (wool and abalone are notable exceptions).

Several participants in the inquiry emphasised the significance of Australia's bargaining power. Qantas argued that:

... the net effect on Australian welfare from the bilateral system is likely to be positive... [because it] allows Australia to maximise its leverage in the pursuit of national objectives on a case by case basis (sub. 25, pp. 62, 64).

This view was shared by Ansett International:

... the current approach to negotiation of aviation rights ... [goes] close to maximising the benefits to Australia under the current bilateral system (sub. 19, p. 54).

However, the international air services bilateral framework also supports many regulatory constraints on the efficient production of, and trade in, international air services that are essentially protective and anticompetitive. These constraints arise from the bargaining power of the bilateral partners, rather than the nature of production of international air services itself.

There are other services which also cannot be produced without cooperation between at least two countries, such as international telecommunications and postal services. Multilateral free trade agreements have been concluded for both of these services, with significant benefits. Thus, the nature of the product does not imply that international agreements need be bilateral, nor that they should be of a highly constraining nature.

9.2.2 Assistance to airlines through the bilateral system

The bargaining power inherent in the bilateral system has allowed individual countries to pursue aviation policies that protect their carriers from international competition. The result is that airlines of varying levels of efficiency are able to compete on the same routes, sustained by anticompetitive constraints in the ASAs and/or subsidies.

These assistance arrangements can be contrasted with assistance measures used in international trade in goods. For example, under the General Agreement on Trade in Services (GATS), the non-discriminatory most favoured nation (MFN) principle means that tariffs applied by WTO members are relatively transparent and generally apply uniformly to imports from all other WTO members. In contrast, the assistance provided through the bilateral system is extremely complex and opaque. It varies between every pair of countries, and in some cases the details are confidential.

The Commission would have liked to measure the assistance provided to Australian airlines by Australia's ASAs during this inquiry. However, the lack

of reliable data and the complexities of the system meant that this was not practical.

From a global perspective, many of the constraints in ASAs do provide assistance to airlines. These devices have been quite effective — relatively few international airlines have gone out of business in the past fifty years. The most efficient airlines do not tend to drive out less efficient operators.

Without barriers to trade in international air services, airlines would need to compete on the basis of their efficiency relative to other carriers competing in the same markets — just as producers compete in other product markets. Consumers and other users of air services would benefit if more efficient carriers entered the market and enhanced competition. Australian airlines would also benefit from free trade in international air services if they were efficient enough to expand into markets for which access has been restricted.

Australian airlines appear to be quite efficient by most world benchmarks (Chapters 2 and 6). Over the last few years, Australian airlines have been overhauling their operations to enhance efficiency and overcome the high cost legacy of past regulation and government ownership. There is scope for further efficiency improvements, especially if artificial regulatory constraints on their operations are relaxed.

9.3 Ownership and control in the designation of airlines

Of all the bilateral system's constraints on efficiency and competition, probably the most fundamental and thereby, intractable problem, is the requirement that national flag carriers be locally owned and controlled.

9.3.1 The problem

Restrictions on ownership and control in national designation of airlines lie at the heart of the constraints on competition in the bilateral system. They provide a foundation for both the current system wherein nearly every country has its own international airline, and an array of protective measures that support it.

Such restrictions on corporate structure and investment increase the costs to airlines (Chapter 6). Airlines are now finding ways of overcoming some of these restrictions, for example by forming alliances or establishing contorted ownership arrangements.

The justification for these restrictions is that each country should exercise its entitlements under the bilateral system through its own flag carrier(s). However,

this reduces the ability for economies to specialise in the production of those goods and services in which they are relatively efficient and have a comparative advantage.² Local ownership and control is not a necessary condition for the bilateral system to function. It is national designation, rather than ownership and control, that is necessary.

Some form of designation will always be required to ensure that governments can effectively regulate safety and other technical aspects of aviation. Currently, designation is also required in order to assign rights to airlines because they are not negotiated on a non-discriminatory basis and countries have different sets of rights.

Ownership and control provisions have been subject to much debate in recent years. At the 1994 World Wide Air Transport Conference, the ICAO Secretariat proposed that the rules for designation be liberalised (Chapter 4). ICAO members indicated broad support for applying the ownership and effective control test at a regional level, for example, as Norway, Sweden and Denmark have designated Scandinavian Airline Systems. They also expressed in principle support for airlines being able to broaden their potential sources of investment by increasing limits on foreign investment in national carriers. However, they did not widely support the option of basing designation on ‘headquarters, central administration or principal place of business’ (ICAO 1994).

The lack of agreement among ICAO members resulted in no change to designation arrangements. In part, this highlights the difficulties of achieving change in multilateral fora such as ICAO. Many ICAO members were not convinced of the benefits of a more competitive framework for international aviation that reduced protection for their own national airlines. One of the major concerns was that relaxation of ownership rules might lead to unacceptable market access by third country carriers. This argument goes to the centre of the ownership debate — it is about protecting national airlines from competition and preventing the development of more efficient airlines that could, in a more liberalised market, be designated by a number of countries. Fear of the anticompetitive effects of the growth of ‘mega-carriers’, principally US carriers, was also apparent.

² Restrictions on foreign ownership would also appear to be inconsistent with the APEC commitment to free and open trade and investment among developed country members by 2010 (and among developing members by 2020).

9.3.2 Ownership and airline safety

The 1994 World Wide Air Transport Conference also highlighted concerns that liberalisation of the ownership criteria could compromise airline safety, particularly through flags of convenience (ICAO 1994).

These concerns largely reflect confusion between the concepts of ownership and designation. Ownership is not a necessary condition for designation, accountability or technical and safety regulation. However, designation is important for technical and safety regulatory purposes because countries are accountable for maintaining the safety standards of their designated carriers.

These non-economic regulatory functions of designation would remain even if international air services were available on a non-discriminatory MFN basis. Some system of accountability between airlines and government regulators would continue to be required.

When there are clear lines of accountability between airlines and the countries designating them, it should not matter where they are owned, any more than in other industries. For example, national governments take responsibility for regulating the safety of pharmaceuticals through recognition of other countries' certification processes as well as through their own — they do not need to own all pharmaceutical production and testing facilities in order to regulate safety. Indeed, in some situations, it might even be easier to enforce safety standards on airlines when the owners are foreigners. If a country is lax about enforcing universal, compulsory safety standards, ownership requirements for designation will not ensure that an airline is safe.

The Commission endorses the need for compulsory universal safety standards which individual countries or airlines can choose to exceed if they wish. However, national ownership is not required for the regulation of safety, as long as a rigorous form of designation is applied and safety regulations are effectively enforced by the designating country. The best way to prevent poor safety standards and the development of flags of convenience is to develop more rigorous safety accreditation procedures, and not to rely simply on mutual recognition of all ICAO members' standards.

9.3.3 Options for reform of designation

Although reform of ownership and control requirements for designation are critical for liberalisation of the bilateral system, options are limited because the provisions are actively monitored and enforced by various countries. Because designated airlines must be recognised by bilateral partners, it is risky for any individual country to change the criteria for designation of its airlines

unilaterally. The United States showed that it was prepared to exercise its 'muscle' when it denied Aerolineas Argentinas status as an Argentinian carrier once it was no longer majority Argentinian-owned. This particular dispute was resolved at the price of concessions to the United States. It highlights the risks to countries from unilaterally changing designation criteria.

Multilateral and bilateral options

The current ownership and control requirements are inhibiting the development of a prosperous and sustainable international airline industry. Global capital markets are requiring higher performance standards from airlines and nations. There are simply too many poorly performing international airlines that are burdening national economies. Conversely, efficient airlines are denied the opportunity to develop to their full potential. If a country could designate an airline domiciled elsewhere, then it could improve its air services and free up scarce capital and technical resources for other, more productive uses.

Australia, with its relatively efficient airline industry, is likely to benefit from international measures to relax the ownership and control requirements for national designation. Australian airlines could become designated carriers for other countries in the region whose economies are not well suited to capital intensive, high technology industries like the modern international airline industry. Australian airlines would also benefit from wider opportunities to obtain capital on world markets.

The Commission considers that designation should be based on a less restrictive test that does not require ownership, and possibly even effective control, by nationals. Options for reform include basing designation on place of incorporation, principal place of business or other evidence of commitment to providing air services for the country. Ownership could be removed as a criterion for designation; regulation of foreign investment could be aligned with that for other industries.

Some governments already use other criteria for designation, reflecting individual circumstances. Some of Australia's ASAs apply different designation criteria. For example, Australia's ASA with Hong Kong requires that each party's designated airlines be incorporated and have their principal place of business in their home economy. This is a common feature of Hong Kong's ASAs, aimed at overcoming the nationality problem associated with Hong Kong's political status.

New Zealand has relaxed the foreign ownership requirement in its more recent bilateral agreements, opting for the less restrictive 'effective control' requirement. Air New Zealand noted that:

For the time being, airlines that complied only with these liberalised criteria would be unable to exercise traffic rights under bilateral agreements containing traditional ownership requirements. However, the intention of New Zealand and the bilateral partners with which it has negotiated these arrangements is to establish precedents that might increasingly be followed (sub. 6, p. 9).

As the Asian financial crisis has focused attention on the need for capital to be used more efficiently in the airline industry, it may be opportune to try again to achieve multilateral agreement to liberalisation of the ownership and control requirements for national designation.

The Australian Government could join with other like-minded governments in a push for reconsideration by the members of ICAO of the 1994 proposals for liberalisation of the ownership and control criteria for national designation.

However, multilateral action is unlikely to be swift. It might be useful also to pursue this initiative within APEC whose members account for a substantial proportion of world aviation or as part of a plurilateral option (see below). In the meantime, Australia should negotiate with its bilateral partners to incorporate in its own ASAs a more liberal means of designating airlines which does not rely on ownership restrictions.

Recommendation 9.1

The Australian Government should join with other like-minded governments to have the ICAO Secretariat's 1994 proposals to liberalise ownership and control requirements for national designation reconsidered for adoption on a plurilateral or multilateral basis.

In the meantime, Australia's own ASAs should be negotiated to incorporate a more liberal means of designating airlines which does not rely on ownership restrictions.

Regional options

Another option to liberalise ownership and control criteria for national designation would be for Australia to invite neighbouring countries to develop a regional approach. Each country would still negotiate its own ASAs, but the airlines could be owned by citizens of any country in the group. While this would require changes to existing bilateral agreements, it should be possible to gain ICAO recognition of such a regional arrangement.

An Australia–New Zealand regional agreement might be the place to start. The trans-Tasman Single Aviation Market already has liberalised the ownership provisions for designation to develop the concept of a SAM airline. A SAM

airline must be majority-owned by citizens of either Australia or New Zealand. This concept could be extended to allow such Australasian carriers to fly under both Australia's and New Zealand's ASAs with third countries. Another option could be to develop a common aviation market between the two countries. The differences in approach which now exist between Australia and New Zealand could be an obstacle to greater integration (Chapter 4). However, if the recommendations outlined in this report are adopted, the policies of the two countries should become more closely aligned.

Alternatively, or in addition, the Australian Government could invite other governments in the region to participate in a regional arrangement. Australia already enjoys close aviation relationships with Papua New Guinea and the island nations of the South Pacific. Freeing up the ownership and control requirements for national designation could allow some rationalisation of airlines, releasing scarce capital resources within the South Pacific Forum countries. Airlines would be able to specialise more, with some becoming regional feeder airlines for the longer range international carriers. This would enable better use of aircraft; airline efficiency and standards of service could improve. Australian airlines could gain greater access to markets and better networking opportunities.

These are very much second-best options relative to liberal multilateral reform. However, if liberalisation could be achieved quickly within the group, it could be beneficial for members and their airlines. As well as gaining access to a greater capital market, some airlines could simplify their corporate structures.

Recommendation 9.2

The Australian Government should invite neighbouring countries to develop, and seek ICAO recognition for, a regional arrangement which would enable relaxation of ownership and control criteria. Countries to be considered should include New Zealand and the South Pacific Forum island nations.

9.4 Unilateral reform

Australia's has undertaken most of its trade liberalisation on a unilateral basis. There are a number of good reasons for this:

- the trade barriers themselves were imposed unilaterally by Australia;
- the barriers may have benefited some producers, but the costs to consumers, users and the rest of the economy were quite high;
- bilateral deals on a reciprocal basis are precluded generally in areas of trade covered by the WTO, apart from customs unions and free trade areas; and
- Australia is a small country in international trade in most goods, so its bargaining power has been relatively weak in most multilateral trade negotiations.

These factors have meant that Australia was unlikely to be able to negotiate better arrangements by waiting for multilateral negotiations to conclude, but would continue to bear the self-imposed costs for the duration of the negotiations. In these circumstances, it has been clearly in Australia's interests to liberalise unilaterally. Would it be equally advantageous for Australia to pursue unilateral liberalisation of international air services while the bilateral system remained?

9.4.1 The unilateral 'open skies' option

One option would be to grant unilaterally to other countries unlimited rights to supply international air services into and out of Australia, without requiring any extra rights for Australia in return.

This option would mean that Australia would cease to negotiate updated or new bilateral agreements and would rely on the rights currently available for Australian carriers. Without expecting any reciprocal action by other countries, Australia would open its skies to foreign carriers, unilaterally removing all constraints on traffic and access rights.

Box 9.1 Participants' comments on unilateral 'open skies'

'Unilateral deregulation of international air services agreements would not see additional carriers enter routes and lower fares or substantial new services added. On the contrary, it would remove the one tool at Australia's disposal for promoting competition in non-price components in many foreign destinations where effective competition policy is deficient. It would also remove the best tool at Australia's disposal for gaining greater access to the international network' (Qantas, sub. 25, p. i).

‘Unilateral deregulation is unlikely to deliver benefits to Australian consumers but could result in losses for Australian provided airline services, jobs and profits. Unilateral deregulation simply passes Australia’s leverage to its bilateral partners. The net result is an overall loss of welfare’ (Qantas, sub. 25, p. ix).

‘... if Australia unilaterally opened its skies without regard to what other countries were doing ... [we would see that] as a very significant detriment to Australian airlines. We believe that there would be no leverage at all for countries to which we don’t have access at the moment or sufficient access to change and therefore all the growth would be available to foreign carriers and none to Australian carriers’ (Ansett, transcript, pp. 188-9).

‘Occasionally some commentators advocate a policy of opening Australia’s skies on a unilateral basis, ie. without regard to the policies of our bilateral partners. Ansett considers such a policy would be quite detrimental to Australia’s interests. It would not enable us, in negotiating a bilateral agreement, to take into account on a case by case basis, the balance of benefits to Australia as set out in the sub-section above. It is a totally inflexible policy that does not enable Australia to respond appropriately to changing circumstances. It could mean for example, that Australian carriers would gain no capacity increases in currently restricted markets with all future growth available only to foreign airlines. Further, it would provide Australia with no leverage to enter new and emerging markets such as South America and Eastern Europe on fair and just terms’ (Ansett, sub. 19, p. 62).

‘The unilateral granting of rights to foreign airlines without securing comparable rights would seriously disadvantage Australian carriers, undermining their ability to compete. Given the commitment and priority accorded by home-based airlines to their home market ... the result would be seriously detrimental to the national interest’ (Air New Zealand, sub. 6, p. 11).

For the purposes of this discussion, it is assumed that no other country reciprocates. The only international rights that would not become frozen in time would be those with the United States (where capacity adjustment is built into the ASA) and New Zealand (where the Single Aviation Market applies). However, fifth freedom traffic is constrained with New Zealand, so it is likely that Australia’s fifth freedom traffic ex-New Zealand would continue to be limited to the equivalent of 12 Boeing 747 flights per week, while New Zealand carriers would not be limited in exercising fifth freedom rights ex-Australia.

Would such an arrangement improve efficiency in resource allocation in Australia and provide Australia with more efficient international air services? Would consumers and other users have a greater range and quality of services at lower prices?

9.4.2 Effects on airlines

In the absence of the bilateral structure, if all countries adopted unilateral ‘open skies’ approaches, the structure of the global airline industry would change radically. Efficient carriers would displace inefficient carriers. In such an environment, Australian airlines would expand or contract depending on their relative efficiency against competing carriers. Users of air services would benefit from more competitive fares.

Unilateral ‘open skies’ within the bilateral structure would not produce the same outcomes. By allowing a bilateral partner to have unconstrained access, the airlines of that country stand to gain an increasing share of traffic to, from and possibly within Australia. However, Australian carriers would not necessarily be able to expand their services elsewhere. This would mean that the rights for Australia’s airlines could be frozen in time, for as long as the bilateral system remained entrenched.

For as long as the bilateral system is accepted and entrenched in the rest of the world, Australian airlines are likely to be severely disadvantaged by a policy of unilateral ‘open skies’. They would be unlikely to share in market growth with increased capacity and frequency (except in the United States and New Zealand). Further, they would not be able to expand their networks to include new destinations.

9.4.3 Consumer effects

Australian users of air services would benefit from a policy of unilateral ‘open skies’ if it led to a greater quantity and range of services and lower prices, or if foreign carriers were more efficient than Australian airlines and generated effective competition.

However, there is no guarantee that these changes would occur while the bilateral framework continues elsewhere. Without opportunities for growth, Australian airlines would lose market share over time. Australian airlines would be denied the market growth which they would otherwise have been able to contest. Consumers who prefer to use Australian airlines, but are no longer able to do so, would also bear the costs of having to use less efficient or less preferred carriers. As a result, both Australian producers and consumers would incur costs. It would also be difficult for Australia to negotiate any new fifth freedom rights.

The quantity and range of flights from Australia to foreign destinations would only increase if the relevant governments permitted this to occur. With the bilateral framework still in place, Australia’s bilateral partners would continue

to control capacity and frequency on Australian routes. They would be able to control entry and curtail competition not only by their own carriers, but third countries' carriers as well.

It is possible that, if Australian airlines were no longer an effective competitive force, airlines from bilateral partner countries would reduce the level of service and increase prices. Australia could retaliate by retreating from its unilateral liberalisation, but would be unlikely to regain the conditions it relinquished. The damage to the Australian airlines could be substantial, for little benefit of consumers. Alternatively, Australia might be tempted to retaliate in other areas of trade against an individual country. The scope for such action is limited. Most of Australia's trade in goods and services is covered by non-discriminatory MFN principles under the WTO.

As long as air services are regulated in a bilateral framework, the degree to which Australia would benefit from a policy of unilateral 'open skies' would depend entirely on how its partners behaved in the new environment. Under some circumstances Australia could be worse off than it is now, and opportunities for gain in the future could be forgone.

9.5 Bilateral liberalisation

Australia has been pursuing a policy of gradual liberalisation on a bilateral basis. Substantial further liberalisation can be achieved.

9.5.1 Strategic sequencing

In any process of bilateral liberalisation, a change in Australia's arrangements with one country can have consequences for its arrangements with other countries. As a result, it is necessary to consider the sequencing of negotiations strategically.

Sequencing negotiations is particularly important as a means of securing fifth freedom rights under ASAs. It may be beneficial to secure fifth freedom rights from country B before seeking agreement to unrestricted fifth freedom rights with country A. By sequencing negotiations in this way, a country can ensure that it secures rights which can be used under a subsequently negotiated liberal policy.

For example, a more liberal agreement between Australia and the United States which increased fifth freedom rights through Japan would allow US carriers opportunities to increase their capacity between Japan and Australia. This would be a consequence of the relatively liberal US–Japan ASA which already

provides for unrestricted fifth freedom rights. However, Australia's ASA with Japan does not include beyond rights for Australian carriers to operate between Japan and the United States. Thus, while US carriers would be able to carry passengers between Japan and Australia, Australian carriers would not have the same rights between Japan and the United States.

Even without fifth freedom rights for Australian carriers, greater competition on routes between Japan and Australia as a result of US carriers exercising their fifth freedom rights would produce benefits for Australia. However, greater access to fifth freedom rights for Australian carriers would enable them to compete head to head with other carriers operating between Japan and the United States. This additional benefit could only be achieved if Australia's ASA with Japan was liberalised as well as the ASA with the United States.

Another example of strategic relationships which are of great importance to Australia are the ASAs with European countries, particularly the United Kingdom, where fifth freedom rights have been constrained. Liberalisation of these bilateral relationships would allow Australian carriers more scope to compete against sixth freedom traffic operating between Australia and Europe through intermediate points such as Singapore.

While strategic sequencing is advantageous, Australia should not wait indefinitely for fifth freedom rights if it significantly delays the benefits of competition that may be derived from liberalisation without them.

9.5.2 Reciprocal 'open skies' agreements

One option for the liberalisation of Australia's air services is to accelerate the process of liberalisation by negotiating bilateral 'open skies' agreements on a reciprocal basis.

The term 'open skies' does not have a precise meaning, but is commonly used to refer to the US template for the liberalisation of ASAs (Chapter 4). The United States has now signed 30 bilateral 'open skies' agreements which generally incorporate the removal of restrictions on third, fourth and fifth freedom traffic, airfare regulation and the number of designated carriers. Seventh freedom rights are negotiable, but cabotage rights are not, and the limits on foreign ownership of US carriers are still highly restricted.

The US 'open skies' policy is often criticised for not being a very 'open' and liberal policy by virtue of it retaining restrictions on cabotage and ownership and control. The New Zealand 'open skies' policy provides a more liberal approach to foreign ownership than the United States as well as allowing for the negotiation of cabotage rights.

A number of participants, including the Western Australian (sub. 30) and Queensland (sub. 39) State Governments, and FedEx (sub. 18), supported the concept of an ‘open skies’ policy for Australia where it was negotiated between countries on a reciprocal basis. The Western Australian Government stated that:

Western Australia favours an ‘open skies’ policy being negotiated on a country by country basis, on the proviso that the other country also agrees to open skies for Australian carriers. ... An open skies policy will give the States and the privatised airport operators much greater potential to deal direct with the airlines. ... An open skies policy will permit additional capacity to be put onto a route as demand dictates and will let market forces prevail and determine the frequencies of services that an airline will provide (sub. 30, p. 3).

DIST also supported an ‘open skies’ approach under the current bilateral system:

In our judgment, given that the current bilateral system of air services agreements is likely to be with us for some time, Australia should place primary emphasis on liberalisation within this sphere. The submission recommends an increase in the pace of liberalisation of Australia’s air services and in particular the adoption of an explicit policy goal of bilateral ‘open skies’. We believe these are pragmatic and realistic objectives (transcript, p. 87).

FedEx commented on the momentum generated by ‘open skies’ policies:

The true power of global hubs is that once a critical mass of countries are connected to them, other countries are obliged to join or risk falling behind their competitors. Gradual bilateral liberalisation provides a strong ‘river’, the pressure of which will eventually break the ‘dam’ of restraints on ‘open skies’ (sub. 18, p. 25).

However, DTRD considered that an ‘open skies’ approach could hamper Australia’s efforts to obtain liberal fifth freedom rights under other ASAs:

It is possible that, across the majority of Australian ASAs, open skies could well be a barrier to increasing fifth freedom rights. Any third country that does not have an open skies agreement with an Australian ‘open skies’ partner is hardly likely to give Australian carriers superior (fifth freedom) access to that market than is available to its own carriers (sub. 60, p. 23).

Some participants, such as Qantas, were cautious about the potential benefits for Australia of an ‘open skies’ policy and advocated a case by case approach to open skies:

Inevitably, under a process of progressive bilateral liberalisation, the point will be reached on occasions when the next practical step will be to agree to open markets in all respects — capacity, routings, service options etc. ... However, for this to occur, it is important that this not be part of an ideologically driven or ‘designer label’ policy but the result of a case by case examination to ensure that Australia is

confident of the benefits to be obtained and has positioned itself in such a way that full use can be made of the opportunities on offer (sub. 67, p. 3).

The aim of a reciprocal ‘open skies’ policy would be to remove restrictions in ASAs on competition and trade between the airlines of each of Australia’s bilateral partners, consistent with technical and safety regulation. Australia would only agree to remove all of the current restrictions on the ability for foreign carriers to fly to Australia if the bilateral partner also agreed to the removal of constraints on Australian carriers.

The Commission considers that the negotiation of reciprocal ‘open skies’ agreements in air services on a bilateral basis would produce significant benefits for Australia. It would enable airlines to respond quickly to market growth and to new market opportunities. Consumers would benefit from greater capacity, expanded network opportunities, and increased competition as carriers take up opportunities to serve new markets. It would also minimise administrative and compliance costs for governments and airlines associated with negotiating incremental changes to ASAs.

Negotiations for reciprocal ‘open skies’ agreements in air services should start with everything on the table. All rights, including seventh freedom rights and cabotage, should be available for the negotiators to exchange. A policy of reciprocal ‘open skies’ would incorporate the removal of restrictions on:

- ownership as a basis for airline designation (as discussed in Section 9.3);
- capacity for third, fourth and fifth freedom rights (including multiple designation of carriers);
- codesharing on each other’s airlines;
- routes including points of access to the Australian market, intermediate and beyond points; and
- prices.

In addition, a reciprocal ‘open skies’ agreement would incorporate restrictions on government subsidies to airlines where necessary. It could also potentially involve the exchange of seventh freedom rights and cabotage on a reciprocal basis or as a trade-off for other benefits.

Unlimited third and fourth freedom rights

Unrestricted third and fourth freedom rights are important as a means of encouraging competition between designated carriers in each country. Together with multiple designation, it also represents an important means of allowing entry by new carriers.

Unlimited third and fourth freedom rights allow designated carriers to compete for market share on a more vigorous basis. By negotiating capacity in more or less equal proportions between bilateral partners, the current agreements can restrict the ability of carriers in one country to take market share away from carriers in the other country. The result is that high cost carriers can be protected from lower cost bilateral partner's carriers. However, there is a limit to the protection that can be offered by restricting capacity because of the availability of a number of alternative routes for travel between countries, even though they may be indirect.

Binding constraints on third and fourth freedom capacity between two countries can have the paradoxical effect of weakening the competitive position of the two countries' carriers in the marketplace in favour of third country carriers. This may occur where capacity limits under ASAs fail to keep pace with market growth. As a result, partner countries' airlines may be unable to expand their services in response to market growth opportunities, and it may be taken up by fifth or sixth freedom carriers instead. Constraints under the Australia–Italy ASA have been associated with third country carriers achieving a relatively high share of the Australia–Italy travel markets (Table 5.1). Removal of capacity constraints could enhance the competitive position of the bilateral partners against third countries.

Fifth and seventh freedoms

Fifth freedom rights are a crucial part of the reciprocal 'open skies' package. They allow carriers to develop new travel products, build efficient networks, and enhance competition from third country carriers.

Expansion of Australia's fifth freedom rights has been a major goal in DTRD's negotiations of bilateral agreements in recent years. Nevertheless, they are still restricted in terms of destinations and capacity. In many cases, intermediate fifth freedom rights are not matched by rights at the destination in a third country. Where fifth freedoms do exist, quantitative limits often apply. Operational constraints such as break of gauge restrictions may also limit an airline's ability to switch from a smaller plane to a larger one to carry additional passengers beyond the intermediate point.

Seventh freedom rights allow airlines to provide 'stand alone' flights between two countries without the flight originating or terminating in the airline's home country. Both fifth and seventh freedom rights are difficult to achieve within the bilateral framework because they require agreement from third countries. As a result, strategic sequencing of negotiations often plays a significant role in achieving these rights. Seventh freedoms are relatively rare, although

recognition of their importance for hubbing and building efficient airline networks is now leading to their inclusion in some agreements.

Route and city designation and other operational constraints

DTRD has been negotiating the progressive removal of city designation from bilateral agreements. However, route and city designation restrictions are still common (Appendix E). Australia's reciprocal 'open skies' template should seek to remove city designation or route restrictions — they would be inconsistent with removal of capacity and fifth freedom constraints.

Removal of such constraints would allow airlines to develop more innovative travel products and respond quickly to changes in market circumstances. For example, if there were no route restrictions in the Australia–US ASA, Australian airlines might have been able to offer flights from Australia to the United States via Manila if they saw an opportunity following the recent cessation of Philippine Airlines' international services (Box 5.3).

In addition to the removal of restrictions on routes and city designation, a reciprocal 'open skies' template should contain no restrictions on the types of aircraft which can be used, or on 'changes of gauge'. Such restrictions prevent the efficient development of networks and impose unnecessary costs on airlines.

Price regulation

Most ASAs contain a mechanism for the aviation authorities of each country to regulate or approve airfares. Of Australia's 51 ASAs, 34 have relatively intrusive double approval mechanisms (whereby tariffs must be filed with, and approved by, aviation authorities in both countries), 15 have a double disapproval mechanism (that is, no specific approval is required, but the aviation authorities of both countries reserve the right to disapprove tariffs) and Australia's ASA with the United States has a country of origin rule (that is, approval by the aviation authority of the country of origin of the flight is required). Only in Australia's ASA with New Zealand is there no price regulation at all.

DTRD stated that:

Australia's policy position is that tariff setting should be for the airlines' commercial judgment and not government regulation, up until the point where the competition authorities detect anticompetitive intent where it becomes a matter for the ACCC (sub. 33, p. 16).

The Commission agrees. The reciprocal 'open skies' template should remove the need for regulatory approval of fares.

Cabotage

Traditionally, cabotage has been closely guarded by countries as a means of protecting their air space and safeguarding their national boundaries. Cabotage is not a part of the US ‘open skies’ model, although New Zealand has been prepared to put it on the table for its ‘open skies’ negotiations with other countries and recently has granted such rights to Brunei. Should Australia include it as part of its reciprocal ‘open skies’ offerings, and what difference would it make?

Allowing foreign carriers some cabotage rights could increase competition and stimulate improvements in efficiency in the Australian domestic aviation industry (Chapter 6). ‘Consecutive’ passenger cabotage (domestic carriage on a domestic leg of a foreign airline’s international flight) could provide marginally costed seats to passengers on long haul routes (for example, Perth–Sydney) who were prepared to pass through immigration control and fly on relatively infrequent services often at inconvenient times. Consumers would gain from any reductions in fares on these relatively expensive routes. Freight users would also benefit from a greater availability and choice of flights.

However, it is unlikely that such services would lead to substantial efficiency gains in Australian resource allocation, as the Australian airline industry is relatively efficient and internationally competitive. Foreign airlines are unlikely to attract higher yielding business and full economy passengers from the domestic airlines on such flights. In such circumstances, the costs of granting consecutive cabotage rights would not be substantial, and there could be some small consumer welfare gains. But would foreign airlines be attracted to low yielding passengers at little more than marginal cost? And what would their governments be prepared to give Australia in return for such cabotage rights?

‘Stand-alone’ cabotage, whereby a foreign airline would be able to establish a domestic network within Australia, has greater potential to increase competition in the Australian domestic market. This could lead not only to benefits to consumers and users of domestic air services as a result of lower air fares but also to efficiency gains for the entire airline industry.

These considerations lead the Commission to the view that cabotage should not be specifically excluded from Australia’s reciprocal ‘open skies’ negotiating package, but should be considered on a case by case basis.

9.5.3 Implementation of a reciprocal ‘open skies’ policy

Since reciprocal ‘open skies’ agreements can be implemented only with the agreement of other countries, the policy could begin with an explicit declaration

of intent. This would state Australia's willingness to put all rights on the negotiating table, subject to constraints on subsidies where these are significant. The aim would be to achieve reciprocal 'open skies' agreements on a bilateral basis with other countries which provide for unrestricted market opportunities between the territories of the two partner countries.

Reciprocal 'open skies' agreements would ideally follow a 'negative listing' approach. This would allow carriers from each country to conduct air services without restriction except for items which were specifically listed as not being allowed. Any restrictions under the agreement would be negotiated exceptions.

The negative listing approach differs from the current approach to negotiating air services which starts from the position of absolute restriction. The rights for carriers to operate are then specifically negotiated and listed in the agreement (Chapter 3). A negative listing approach is applied in many other areas of trade.

The negative listing approach has a number of advantages. First, it enables any new form of trade to be automatically included as part of the trading arrangements. For example, the widespread introduction of codesharing by airlines around the world meant that in most cases Australia had to negotiate for codesharing to be included specifically in its ASAs. Second, it is generally easier to negotiate for the removal of the remaining restrictions than to negotiate for the addition of certain activities or traffic rights. Third, it is consistent with the General Agreement on Trade in Services (GATS) trading framework and would therefore facilitate a transition to a broader plurilateral or multilateral trading system for air services.

Some countries would be more prepared to enter into a reciprocal 'open skies' agreement than others. DTRD emphasised that:

We must also consider the position of our major partners, in examining whether there are good prospects for entering into such agreements. Aside from the UK, US and New Zealand, the overwhelming majority of our bilateral partners are not prepared to sign 'open skies' agreements with Australia, and particularly not on a basis that would provide any greater advantages to us than we currently enjoy (sub. 33, p. 29).

It is unclear why many bilateral partners would be reluctant to enter reciprocal 'open skies' arrangements with Australia. It has been argued that Australia's geographical position and its relatively small population make it unattractive for other countries. However, this report has shown that in aviation terms, Australia is actually quite a large country. In addition, New Zealand has been able to sign 'open skies' agreements with the United States, Singapore, Malaysia, Brunei, Chile and the United Arab Emirates from a position arguably less favourable than Australia's.

There are a number of countries with which Australia could seek to negotiate reciprocal ‘open skies’ agreements and have some prospects of success. The countries that have already signed ‘open skies’ agreements with New Zealand or the United States provide a starting point.

Strategic sequencing of negotiations would still need to be considered. However, the need to make consequential amendments to ASAs continuously would slowly disappear as a network of reciprocal ‘open skies’ agreements was achieved. Initially, Australia could focus on those countries that have the most incentive to sign such agreements, and where the national benefits to Australia, broadly defined, are the highest.

The Commission recommends that Australia should immediately announce a bilateral reciprocal ‘open skies’ international aviation policy.

Recommendation 9.3

The Commission recommends that Australia should seek to negotiate reciprocal ‘open skies’ agreements on a bilateral basis which would remove restrictions on:

- capacity and frequency to, from, between and beyond Australia and the bilateral aviation partner;
- codesharing on each other’s airlines;
- routes, including points of access to the Australian and the bilateral partner’s markets, intermediate and beyond points;
- multiple designation of airlines by Australia and the bilateral partner;
- ownership as a basis for airline designation; and
- prices.

Such reciprocal agreements should also contain restrictions on government subsidies where these are significant. Australia should also be prepared to negotiate, on a case by case basis, removal of restrictions on cabotage and the development of ‘stand alone’ services between the bilateral partners and third countries (so called seventh freedom services).

Not all countries may be prepared to negotiate bilateral ‘open skies’ agreements with Australia. For those countries, Australia should seek to negotiate as liberal a position as possible.

9.6 Regional reform options

A number of participants argued that the focus on Sydney as Australia's premier gateway, and limitations on the number of points and cities that could be served in Australia's ASAs, were denying international air services to the rest of the country. Even when a city, such as Darwin or Adelaide, is designated in an ASA, the high opportunity costs of operating to secondary gateways caused by capacity constraints make it difficult to attract international air services. Where airlines are forced to make a choice between Sydney and an alternative destination, they will choose Sydney. Participants claimed that this policy stunted growth of both international trade and tourism. Easing these restrictions could create greater opportunities for international air services to regional Australia.

9.6.1 The Glenda Jackson offer

The UK Minister for Aviation (Hon. Glenda Jackson, MP) has recently offered unlimited capacity to secondary gateways in the United Kingdom (all airports except Heathrow and Gatwick) to all bilateral partners, provided that they offer similar rights in return (Chapter 6). The Australian Government should take up this offer.

Australia could make similar offers to other countries. In light of Sydney's predominance as a gateway, Australia could offer unlimited capacity to all cities other than Sydney, outside ASA restrictions, as long as reciprocal rights (including codeshares) were also made available to Australian airlines.

These extra rights would be reciprocal and route specific, for example Adelaide to Stanstead, Melbourne to Milan or Darwin to Kuching. Such arrangements could be complementary to the regional air services liberalisation arrangements now operating among Brunei, Indonesia, Malaysia and the Philippines and could provide niche opportunities for Australia's international carriers. The Commission considers that there would be considerable advantages from such an arrangement. It would provide extra capacity to reduce the opportunity costs of operating to regional areas and could stimulate growth in tourism and trade, as well as provide new markets for Australian airlines.

9.6.2 Unilateral options

There is also scope for unilateral (unreciprocated) liberalisation of restrictions on operations to regional centres. One option is to remove restrictions on the number of points which can be served as well as designation of the specific

cities, but within capacity negotiated in ASAs. This would allow airlines greater freedom in developing their Australian routes.

Whether such unilateral action should include all cities other than Sydney would depend on the negotiating coin Australia could derive from limiting access to other cities, particularly Melbourne, Brisbane and Perth. Both Melbourne and Perth airport operators suggested that they were very much secondary gateways compared with Sydney, and that no city designation restrictions should apply (sub. 65 and transcript, pp. 422 and 438).

In contemplating unilateral liberalisation, the benefits to be derived would clearly need to outweigh the costs. The costs of allowing unlimited access to Melbourne, Brisbane and Perth in terms of lost negotiating coin, could be greater than for less populous cities such as Adelaide, Darwin, Hobart and Townsville. The Commission therefore considers that liberalisation of access to Melbourne, Brisbane and Perth, like Sydney, should continue on a negotiated bilateral, rather than unilateral, basis. However, the proposal outlined above, for unlimited *reciprocal* access to cities other than Sydney, would provide significant opportunities to increase capacity and access to these three cities.

Removing restrictions on serving secondary gateways will not guarantee the start-up of services but, in conjunction with domestic codesharing and less restricted own-stopover rights, it could facilitate the development of new and more innovative air services to many regions of Australia. This initiative would provide net benefits to regional economies, the tourism industry and the economy as a whole, with little cost to Australian airlines in terms of lost opportunities abroad.

The full benefits of improved access to secondary gateways may depend on the removal of any restrictions on domestic codesharing from Australia's ASAs. Domestic codesharing would enable overseas airlines to offer their customers relatively seamless service to any point in Australia served by Australian airlines if they were able to negotiate a commercial deal with Australian domestic airlines. This would improve their ability to market Australia as a tourist destination and generate additional traffic. Domestic codesharing should be a matter for the commercial judgment of airlines, and not be subject to government regulation in ASAs.

Facilitation of charter services represents another approach to promoting regional development by serving cities in which scheduled carriers lack interest. While more use could be made of charter services, no change of policy appears to be required to allow this to happen. DTRD claimed that:

In relation to passenger charter policy, successive Governments have adopted a liberal approach to encouraging these operators, especially when they have sought

to serve secondary (ie outside major capital city) gateways in Australia (sub. 33, p. 16).

Finally, the availability of own-stopover rights for foreign carriers operating services between ports in Australia could facilitate joint tourism packaging between States and increased traffic on international flights at secondary gateways (South Australian Government, sub. 3). The Victorian Government argued that own-stopover rights allow:

... [foreign] airlines to market multiple Australian points and reduce costs to inbound tour operators, thus improving Australia's competitiveness as an international destination (sub. 27, p. 9).

The greater availability of own-stopover rights would also improve the financial viability of operating multi-stop services by foreign airlines.

However, DTRD argued that some states would be sensitive about removal of city designation. It cited examples where carriers are required to serve a particular route such as to Darwin or Adelaide which they may not serve otherwise. As a result, it argued that some States would be disadvantaged by removing all restrictions on city designation (transcript, p. 385)

In addition, DTRD argued that:

In a couple of those cases the foreign carriers that serve that particular destination operate to very substantial hubs in South-East Asia. Additional carriers in that market may destabilise the commitment that those hub carriers have made to that destination, so you will give a range of views, I suspect, on whether too much liberalisation in some of those regional markets may in fact come at a cost (transcript, p. 385).

The Commission has concluded that regional Australia is likely to benefit more from a liberalised approach to providing access to secondary gateways than from the preservation or development of restrictive arrangements, particularly if additional capacity is introduced.

Recommendation 9.4

As a step towards the further liberalisation of international air services, the Commission recommends reforms to ASAs to benefit regional Australia, encompassing both bilateral and unilateral elements:

Bilaterally, Australia should offer unlimited capacity to fly to all airports other than Sydney, provided that Australian carriers are offered the same routes on a reciprocal basis by their bilateral partners. The Australian Government should take up the British offer of similar opportunities.

Unilaterally, Australia should offer, within negotiated capacity:

- removal of restrictions on the number of points to be served and designation of all cities in Australia other than Sydney, Melbourne, Brisbane and Perth;
- unrestricted rights for foreign airlines to codeshare to all points in Australia on Australian domestic airlines; and
- unrestricted rights for foreign airlines to carry their own-stopover traffic.

9.7 Plurilateral open club

As reciprocal ‘open skies’ agreements become increasingly common on a bilateral basis, the possibility arises for the development of a common agreement among a number of countries which would extend the scope from a bilateral to a plurilateral context. This could involve the creation of an open club of countries which would provide the benefits of the common liberal ‘open skies’ agreement to all who joined.

9.7.1 Characteristics of the club

The current regulatory framework has demonstrated its ability to accommodate a degree of liberalisation. However, it still inherently limits the potential for competition and further development of the international aviation industry.

A more promising option for reform may be to develop an aviation open club of countries based on a common agreement which would allow all carriers within the group to have similar sets of rights. For example, Australia might start a club with countries X and Y which gives the carriers of all three countries unlimited rights to operate into and out of any international airports of all three countries. Consideration might also be given to granting cabotage rights within the club. A key feature of the club is that it would be open to other countries to join on the same conditions.

Compared with a more general multilateral approach (where the potential for reform could be limited to what the least restrictive country would be prepared to negotiate), the open club offers a better chance for initiating worthwhile reform. This is because it could evolve from a small group of like-minded countries which are prepared to liberalise their aviation sectors. A common agreement would also have a distinct advantage over the complex set of bilateral agreements it would replace.

Havel concurred:

A global multilateral instrument is currently unattainable. The bilateral system, centred in national sovereignty, is ideally suited to those states that continue to assert the wellbeing of their national carriers as the highest priority in aviation policy. Any attempt to corral these states in to a wider multilateral framework would have GATT-like consequences: agreement may result, but it would be pitched to the 'lowest common denominator' ... embracing areas of general consent that could prove even less liberal than current bilateral practice (1997, pp. 405–6)

The benefits to members would grow in proportion to the size of the network. At the same time, the opportunity costs of not being a member of the club would also increase. Non-members run the risk of becoming isolated by air traffic which responds to more liberal conditions available within the club. Countries that may be reluctant to negotiate 'open skies' agreements on a bilateral basis may find they have little choice but to join the club.

The open club idea draws on the principles of open regionalism but with an important difference. Under the WTO, signatories are required to treat the products and services of other countries on a non-discriminatory MFN basis — that is, in general they cannot treat the products of one foreign country differently from those of another, except in a free trade area or a customs union. Open regionalism describes the action of a group of countries reducing impediments to trade among themselves, but not creating any new artificial distinctions or discrimination between members and non-members (Elek 1996). For example, APEC commitments to trade reform amount to a coordinated program of unilateral actions by members to reduce trade barriers without discriminating against non-members.

An aviation open club would operate differently. International air transport has been specifically exempted from the GATS. Most countries apparently wish to retain the bilateral system, and that system fundamentally contravenes the non-discriminatory MFN principle. An aviation open club cannot help but discriminate against non-members because it would grow out of the bilateral system. The difference is that club members would offer one set of rights to all other club members, and other sets of rights (bilaterally) to non members. But non-members would be free to join. As membership grew, discrimination between nations would decline. Transparency would be important to ensure that non-members could understand the conditions of membership, and be forewarned about changes to club rules.

The difficulties of establishing such a club should not be underestimated. Not all countries may wish to join a club, or allow certain other countries to do so. Countries with entrenched political or other differences may not wish to cooperate in such a way. Airlines in member countries may have an incentive to resist extending the boundaries of the club if it would mean entry of other more competitive airlines. However, accession would be important because the

overall benefits, including benefits to users, would grow as the size of the aviation network grows.

To enhance the chances of the open club becoming a vehicle for widespread reform, the club should:

- not intentionally disadvantage outsiders any more than the bilateral agreements it replaces;
- have transparent rules;
- allow new members to join on the same terms and conditions; and
- contain provisions relating to competition policy, particularly relating to restrictions on significant government subsidies.

A result comparable to an open club could be achieved by negotiating similar bilateral agreements between a series of partners. But each agreement would then need to contain similar provisions; this would be difficult to achieve through a series of bilateral negotiations.

The United States has ‘open skies’ agreements with 30 countries. To offer the airlines of each of these 30 countries the same possibilities for network development as enjoyed by the US carriers, there would have to be 465 bilateral ‘open skies’ agreements. The same network possibilities would exist for all the airlines with a single plurilateral ‘open skies’ agreement covering the 31 countries. Progress would probably be best served by a small number of countries developing a plurilateral open club agreement and inviting other countries to join, rather than trying to develop it through an extensive network of bilateral agreements.

One challenge that confronts Australia and other nations is the possibility that other countries may develop aviation agreements that are not open to outsiders. The challenge is to ensure that regional or plurilateral agreements are used as a stepping stone to global liberalisation and not as an exclusive device to favour members. Openness is a key factor in this.

Recommendation 9.5

Australia should invite like-minded countries to discuss the formation of an open club of nations committed to liberalising international aviation through a common plurilateral ‘open skies’ agreement.

9.7.2 Implementation

There are different approaches to targeting the right start-up group for a plurilateral agreement. Some of the same considerations suggested for targeting 'open skies' bilateral agreements apply. But in this case a more strategic approach may be necessary because the early members will be influential in shaping the agreement.

While the principles of the club are that everyone would be eligible, Australia could be proactive in approaching countries with which it might have the best chance of negotiating the most liberal core conditions. Thus, membership by the United States may limit the potential to negotiate cabotage rights or more liberal ownership rules among members. On the other hand, just as in the bilateral 'open skies' option, many of the US's 'open skies' partners would be an obvious starting point.

It is possible, of course, that just as some US 'open skies' partners may be hesitant to enter into similar agreements with each other, they may not wish to join a plurilateral open club if the other is a member. Most US 'spoke' countries would probably gain economically from 'open skies' agreements with each other, but there may be cultural or political barriers to doing so. Indeed, there could be resistance from the United States, which benefits from being at the centre of a hub and spoke system, and whose benefits could be eroded by a broader plurilateral or multilateral system.

APEC might be considered an appropriate group for developing an open club for a number of reasons. Many APEC members are important aviation trading economies. It has been a fast growing region and already contains several economies with relatively liberal arrangements (principally because of the US 'open skies' policy).

The Department of Foreign Affairs and Trade (DFAT) suggested that there is limited scope for liberalisation through APEC, considering that:

... the APEC forum provides an opportunity for a cooperative and constructive approach to liberalisation of aviation services, an approach which distinguishes itself from the adversarial national interest approach usually adopted in bilateral air services negotiations. However, the sensitive nature of this issue and the consensus-based approach to APEC decision making will continue to dictate the pace and direction of reform in APEC (sub. 52, p. 3).

However, the club need not include all 21 APEC members:

... as long as the initiatives taken by some are positive examples which are designed to maintain the cohesion of APEC and to provide practical means, as well as incentives, to widen the coverage to include all of the region (Elek, Hooper, Findlay and Warren sub. 54, p. 12).

A 21 minus X approach is consistent with APEC. But if 21 minus X is a very small number, the rationale for confining membership of the initial group to APEC members would have to be questioned. Australia has been pushing for liberalisation of air freight within APEC, with little support to date. New Zealand and its APEC ‘open skies’ partners might be a more liberally minded group to start with.

The incentive for some countries to join would relate to the benefits and costs from better access to existing members. An open club would enhance the development of efficient networks by giving all members what are effectively matching sets of fifth and seventh freedoms. But some countries which already have important international hubs may perceive an ‘open skies’ policy as detrimental to their airlines unless it opens further opportunities for extending the airlines’ networks. In this more competitive framework, some carriers would be in a better position than others, and some rationalisation may be inevitable. The benefits of obtaining access to the network could help countries that may not have much to trade in a bilateral framework.

To illustrate the possible benefits and costs of an open club, the Commission developed a model, described in Appendix F. Three scenarios were developed, but data limitations have severely constrained their application and precluded satisfactory country disaggregation.

Under the first, the airlines of the countries in the open club are freed from restrictions on their operations and allowed to achieve the benchmark productivity of the most efficient carrier (for example, Ansett is able to achieve Cathay Pacific’s productivity). Under this scenario, airline profits, consumer welfare and economic welfare all increase for club members as a whole. Costs and prices fall within the club, but those countries and airlines outside the club are disadvantaged. Those consumers from non-club countries who fly on club airlines benefit from lower prices, but the non-club airlines lose market share and their profits fall.

In the second scenario, airlines of club members become free to fly wherever they like within the club, and to enter new markets previously denied them under the bilateral system (for example, China Air could enter the Tokyo–Sydney market). This allows club airlines to configure their networks in new ways. The model generates new hubs, better aircraft utilisation and increased frequency of service within the club. Lower costs translate into lower fares as a result of increased competition among the club airlines. This leads to a drop in airline profits but an increase in consumer and total economic welfare for club members as a whole.

In the third scenario, the two effects are considered together. The net increase in economic welfare is even greater because of more efficient and flexible networks, increased competitive pressure and increased consumer benefits. However, the non-club economies suffer net reductions in economic welfare.

These model results illustrate the economic forces which could be unleashed in an open club of countries with a common 'open skies' agreement. The bigger the club, the bigger the benefits and the greater the disadvantages faced by non-members.

Australia may be able to cement its place in the plurilateral club by taking the initiative to establish it. The Cairns Group illustrates the possibilities for an Australian initiative in international negotiations.

9.8 Multilateral liberalisation

Regulating international air services in a liberal multilateral framework offers potential benefits over what might be achieved through other approaches. A liberal multilateral agreement which covers all or most countries would allow air services to develop in response to market pressures. Efficient carriers would replace inefficient carriers and the removal of regulatory barriers to entry would enhance competition. A multilateral system would be easier to administer and comply with than the current bilateral system.

DIST summed up the benefits of moving to a multilateral structure:

A multilateral approach would seem to be the preferred option, since in recognising that there is little difference between aviation services and other traded goods, it could potentially bring trade in these services in line with the general trend in the trade in services (such as is occurring under the jurisdiction of the WTO). It would also provide a mechanism for pulling more conservative nations along the deregulation path (sub. 31, p. 26).

Qantas also recognised the benefits of moving to a truly multilateral framework:

Multilateral deregulation could provide benefits to Australia especially in achieving improved access overseas for Australian airlines. This would increase the competitiveness of Australian airlines because of the disadvantages they face relative to geographically better located foreign airlines (sub. 25, p. 49).

The Australian Chamber of Commerce and Industry described what a multilateral agreement could include:

Key elements of any [multilateral] negotiations should include: ensuring liberal market access, with no restrictions (bar genuine safety considerations) on capacity or frequency of services; charges, prices and fares should be set by the market, subject only to bona fide competition policy issues; both passenger and freight

movements; and, transparent and welcoming accession arrangements for countries which wish to join during or after the negotiation processes (sub. 26, p. 5).

Attempts have been made to bring air services into a multilateral framework through ICAO and the WTO. A first but unsuccessful attempt was made at the Chicago Convention in 1944. Although ICAO has responsibility for developing economic regulation, most countries have remained wedded to the bilateral framework. ICAO has focussed on developing standards for safety and security. Responding to the Uruguay Round of multilateral, multisectoral trade negotiations and the possibility that air services might be included in the GATS, the ICAO Secretariat proposed various reforms to economic regulation of international air transport. The ICAO assembly considered them in 1994, but did not agree to them.

The Uruguay Round also made little headway on air services. Air services are within the ambit of the GATS in principle, but an Annex explicitly excludes most of them. Only aircraft repair and maintenance, the marketing of air services, and computer reservation systems are covered. This Annex can only be amended or removed by a two thirds majority (currently 88) of WTO members. It provides for periodic reviews at least every five years, with the first review to take place by 2000. Thus, there is scope to remove the exemption, but DFAT advised that:

... there have been no discussions by Members of the forthcoming review nor any indication of likely negotiating positions (sub. 52, p. 4).

If air services were to be covered by the general provisions of the GATS, Australia's ASAs with WTO members could become redundant. However, WTO members would need to maintain bilateral agreements with countries that are not members of the WTO.

Extending non-discriminatory, MFN treatment to air services would prohibit countries from discriminating among WTO members except in the context of a trade agreement such as a free trade area or a customs union. This absence of discrimination means that under the GATS, the nationality of airlines, and the national designation of airlines as under the present bilateral system, would be less relevant. A country would still be able to restrict access to its airspace and to its domestic traffic, but it could not do so in a manner that discriminated among foreign airlines, except in the context of agreements for economic integration. Nor could the controllers of airspace, or the operators of airports, discriminate among foreign airlines on the basis of nationality.

However, given existing attitudes to air traffic rights, it would not be easy to obtain the two thirds majority to repeal or amend the Annex, especially given that some otherwise liberally minded WTO members such as the United States

and the EU supported the exemption in the first place (sub. 33). Indeed, as noted above, there are advantages to US carriers from preserving and extending the hub and spoke set of ‘open skies’ bilateral agreements around the US hub, rather than fostering a multilateral ‘open skies’ agreement.

Many participants were wary of the time that any multilateral approach would take and the possibility that reforms would be watered down by the more conservative parties. FedEx stated that:

Any attempt to substitute a multilateral approach will result in multilateral agreements which are acceptable to the most restrictive countries. They will contain the ‘lowest common denominator’ of rights and this will slow the progress of full liberalisation (sub. 18, p. 25).

DIST noted that change has been difficult to achieve despite Australia’s efforts to promote a liberal agenda:

While there are a number of alternative international organisations that could be used to achieve this goal, including the WTO, APEC and the various international transport based organisations, we understand Australia already takes a relatively liberal approach in these fora. It appears progress is being held back by the attitude of countries that wish to continue protecting their aviation industry.

Although the potential gains from a multilateral approach to aviation regulation justify continuing effort in this area, given the limited gains to date, there is also a need to review the options available under the alternative bilateral mechanism (sub. 31, p. 26).

Given the entrenched position of bilateral negotiations as the basis for exchanging rights, and the difficulties of negotiating a true multilateral agreement, bilateral and plurilateral options may offer the best prospects for achieving gains in the short to medium term.

Nevertheless, Australia should support the eventual inclusion of international air services in the GATS, while simultaneously pursuing other initiatives. A useful starting point would be to include other so-called ‘soft rights’ such as ground handling. The ways this might be achieved should be discussed during the forthcoming review of the GATS which is required to start by 2000.

Recommendation 9.6

The Australian Government should promote discussion within the WTO membership to determine a process for including all air services in the GATS.

9.9 The Commission's preferred approach

The global aviation industry has reached a critical point in its development. The inefficiencies imposed on the world aviation industry by the current bilateral system are now apparent. The complacency shown by many governments about the costs of the system, as recently as the ICAO World Wide Air Transport Conference of 1994, is giving way as they privatise and/or cease to subsidise their airlines. Alliances are multiplying, partly to overcome regulatory barriers, and the benefits of more efficient, internationally competitive air services are being demonstrated. Bilateral 'open skies' agreements are spreading.

This situation opens up opportunities for Australia, but it also points to the danger that Australia could be left behind if it does not act quickly. Australia could be disadvantaged if other countries' air services become more efficient relative to Australia.

Options for further liberalisation of Australia's international air services framework have been outlined in this chapter, in addition to the recommendations made throughout this report to improve other aspects of international aviation. Options for marginal improvements to the status quo were discussed, but such changes will not go far enough to allow Australia's airlines to achieve their full potential, nor will they bring the full benefits to user industries such as tourism or to the economy as a whole.

The Commission also examined the case for the most radical option, a policy of unilateral 'open skies'. It has concluded that when the rest of the world is still committed to the bilateral system, such a policy, far from being welfare enhancing, could make Australia worse off, particularly in the context of growing markets.

The Commission has also outlined a number of options for liberalising international air services which could make Australia better off. They consist of separate but consistent measures which should be pursued on a number of fronts concurrently.

This is an ambitious program, and would clearly require an increase in resources for DTRD and an upgrading of DFAT's knowledge of air services, as they would be expected to play a significant role in plurilateral and multilateral negotiations.

It will also require greater community understanding and input. This will require implementation of the recommendations in Chapter 5 for greater transparency, improved consultation processes and a clear statement of government policy.

The Commission's preferred options

The Commission recommends a package of reforms aimed at improving the gains from Australia's international air services framework, involving:

- liberalisation of ownership and control requirements for national designation of airlines (Recommendation 9.1);
- developing and seeking ICAO recognition for a regional arrangement involving Australia, New Zealand and possibly other nations of the South Pacific, which would enable relaxation of ownership and control criteria (Recommendation 9.2);
- a policy of reciprocal bilateral 'open skies' agreements (Recommendation 9.3);
- enhanced international air services to regional Australia through the regional package (Recommendation 9.4);
- inviting like-minded countries to discuss the formation of an open club of nations committed to liberalising international aviation through a common plurilateral 'open skies' agreement (Recommendation 9.5); and
- promoting discussion among WTO members to determine a process for including international air services in the GATS (Recommendation 9.6).

9.10 Competition principles legislative review findings

One of the aims of this inquiry was to review the Commonwealth's policy on International Air Service Agreements and the IASC allocation process in accordance with the Government's Legislative Review Schedule under the Competition Principles Agreement.

The guiding principle for such reviews is that legislation should not restrict competition unless it can be demonstrated that:

- a) the benefits of the restriction to the community as a whole outweigh the costs; and
- b) the objectives of the legislation can only be achieved by restricting competition.

In relation to the Commonwealth's policy on ASAs, the Commission has found that many aspects of Australia's ASAs are anticompetitive, but that there is only limited scope for unilateral action that would enhance economic welfare. The Commission's recommended course of action is outlined in the package above and involves action at both bilateral and multilateral levels, as well as improved consultation and transparency by DTRD.

In relation to the IASC's allocation process, the Commission has found that a market-based allocation system would not lead to more competitive outcomes than the present bureaucratic process using the IASC. It has also found that the IASC's guidelines and processes are procompetitive, but that there is scope for simplification, improving their efficiency, certainty and timeliness and reducing administration and compliance costs. Recommendations in respect of the IASC are in Chapter 7.

A CONDUCT OF THE INQUIRY

A1 Introduction

This appendix outlines the inquiry process and the organisations and individuals that have participated in the inquiry to date.

The Commission is to report to the Commonwealth Government by 12 September 1998 on the arrangements for negotiating entitlements under Australia's air services arrangements (ASAs) and for allocating capacity entitlements to Australian carriers.

As in all of its inquiries, the Commission's aim is to improve the overall performance of the Australian economy. It will have regard to the established economic, social, environmental and regional development objectives of governments. The full terms of reference are on page XIX.

Following receipt of the terms of reference, the Commission placed a notice in the national press inviting public participation in the inquiry and released an issues paper to assist participants in preparing their submissions. The Commission received 55 submissions prior to the release of the draft report and an additional 26 following the draft report. Those who made submissions are listed in Section A2.

The Commission also held informal discussions with companies, government agencies and other organisations involved in international air services in Sydney, Melbourne, Brisbane, Perth, Adelaide, Canberra and overseas. This visit program was important in obtaining a wide understanding of the issues confronting the industry and the views of participants. Organisations visited by the Commission are listed in Section A3.

The Commission held public hearings in Melbourne and Sydney in March. Following the release of the draft report public hearings were held in Melbourne in July. Public hearing participants are listed in Section A4. Submissions and transcripts of these hearings are publicly available.

A technical seminar and a workshop were held on 17 July and 31 July 1998 respectively to discuss the modelling presented in Appendix F. In addition, the Commission also established an Independent Review Panel to comment on the modelling. Participants and panel members are listed in Section A5.

A2 Submissions received

<i>Submitter</i>	<i>Submission no.</i>
Australian Capital Territory Government	50
Aerolineas Argentinas	9
Air New Zealand	6
Ansett Australia Limited and Ansett International Limited	19, 43, 53, 66, 72
Asia/Pacific Cabin Safety Working Group	11
Australia World Airways	22, 69
Australian and International Pilots' Association	24, 61
Australian Chamber of Commerce and Industry	26
Australian Competition and Consumer Commission	49
Australian Customs Service	2
Australian Family Party	75
Australian Services Union	20, 70
Australian Tourist Commission	29, 64, 74
Avalon Airport Australia	14
Board of Airline Representatives of Australia	21
Brisbane Airport Corporation	10, 77
British Airways	36
Broome International Airport	35
Cairns Port Authority	51
Department of Foreign Affairs and Trade	52, 78
Department of Industry, Science and Tourism	31, 44
Department of Transport and Regional Development	33, 60
DHL International (Australia)	17
Elek, A., Findlay, C., Hooper, P. and Warren, T.	54
Emirates Airlines	1
Federal Express	18, 45
Flight Attendants' Association of Australia	12, 37
International Air Services Commission	42, 62
International Air Transport Association	8
Lockwood and Penney	5, 56

(continued)

<i>Participant (continued)</i>	<i>Submission no.</i>
May, Philip T.	57
Melbourne Airport	23, 65
National Jet Systems Group	7
New South Wales Government	81
New Zealand External Aviation Policy Committee	34, 76
Newcastle Airport	28
Northern Territory of Australia	40
Qantas Airways Limited	25, 47, 67, 68
Queensland Government	39, 48
South Australian Government	3, 46, 63
Sydney Airport, Federal Airports Corporation	13
Tasmanian Government	41, 73
Tassal	16
Tourism Council Australia	32, 79
Tourism Task Force	38
Tropic Isle Air	58
United Airlines	4
Victorian Government	27, 80
Western Australian Government	30, 71
Westralia Airports Corporation	15, 59

A3 Visits

Australia

Adelaide Convention Centre
Air New Zealand
Airport Coordination Australia
Ansett Group
Australia World Airways
Australia–Japan Research Centre, Australian National University
Australian Federation of International Forwarders
Australian Federation of Travel Agents
Australian and International Pilots' Association
Australian Services Union
Avalon Airport Geelong
Board of Airline Representatives Australia .
Brisbane Airport Corporation
Bureau of Transport and Communications Economics
Business Victoria
Centre for Asia Pacific Aviation
Department of Foreign Affairs and Trade
Department of Industry, Science and Tourism, Office of National Tourism
Department of Transport (South Australia)
Department of Transport (Western Australia)
Department of Transport and Regional Development
Federal Airports Corporation, Sydney Airport
Federal Express Corporation
Flight West Airlines
International Air Services Commission
National Jet Systems Group
New Zealand High Commission
Primary Industries South Australia
Qantas Airways Limited
Queensland Department of Premier and Cabinet

(continued)

Australia (continued)

Queensland Travel and Tourism Corporation
South Australian Farmers Federation
South Australian Tourism Commission
TNT Express Worldwide
Tourism Council Australia
Tourism Victoria
Victorian Department of Premier and Cabinet
Western Australia Air Freight Export Council
Western Australia Inbound Tourism Operators Association
Western Australian Tourism Commission
Westralia Airports Corporation

(continued)

Overseas

Air New Zealand

Australian High Commission, New Zealand

British Airways

Civil Aviation Authority of Singapore

European Commission, Competition Directorate

European Commission, External Relations Directorate

European Commission, Transport Directorate

International Air Transport Association

International Civil Aviation Organization

New Zealand Business Round Table

New Zealand External Aviation Policy Committee

New Zealand Ministry of Transport

New Zealand Tourism Board

Singapore Airlines

Transport Canada

UK Civil Aviation Authority

UK Department of Environment, Transport and the Regions

United Airlines

US Department of Justice

US Department of State

US Department of Transportation

US Senate Committee on Commerce, Science and Transportation, Subcommittee on Aviation

Virgin Atlantic Airways

Wilmer, Cutler and Pickering

A4 Public hearing participants

Initial public hearings

Aerolineas Argentinas
Ansett Australia
Asia Pacific Cabin Safety Working Group
Australia World Airways
Australian and International Pilots' Association
Australian Services Union
Australian Tourist Commission
Broome Airport
Centre for Asia Pacific Aviation
Department of Industry, Science and Tourism
Department of Transport (Western Australia)
Department of Transport and Regional Development
Federal Express
Flight Attendants' Association of Australia
Melbourne Airport
Qantas Airways Limited
South Australian Government
Sydney Airport
Westralia Airports Corporation

Draft report public hearings

Adelaide Airport
Ansett
Australia World Airways
Australian and International Pilots' Association
Australian Services Union
Australian Tourist Commission
Department of Transport and Regional Development
Melbourne Airport
Qantas Airways Limited
South Australian Government
Westralia Airports Corporation

A5 Modelling development

Workshop participants

Associate Professor Ralph Snyder
Monash University

Associate Professor Harry Clarke
La Trobe University

Dr Matthew Cumberworth
Australian and International Pilots' Association

David Pearce
Centre for International Economics

Zita Pease
Qantas

Kim Trouncer
Qantas

Darren Giri
Ansett

Leanne Johnson
Department of Industry, Science and Tourism

Ping Wu
Department of Industry, Science and Tourism

Technical seminar participants

Associate Professor Christopher Findlay
University of Adelaide

Associate Professor Ralph Snyder
Monash University

Professor Allan Woodland
University of Sydney

Professor Gordon MacAuley
University of Sydney

Associate Professor Harry Clarke
La Trobe University

Panel members

Associate Professor Christopher Findlay
University of Adelaide

Associate Professor Ralph Snyder
Monash University

B COMPETITION PRINCIPLES AGREEMENT

The Commission's review of Australia's international air services arrangements (ASAs) and the *International Air Services Commission Act 1992* represents part of the Commonwealth Government's commitment under the Competition Principles Agreement to review legislation.

The agreement forms part of the national competition policy which all Commonwealth, State and Territory governments agreed to implement in April 1995. It commits the Commonwealth, State and Territory governments to review anticompetitive legislation and regulations, setting out the principles for such review. The guiding principle is that legislation should not restrict competition unless it can be demonstrated that:

- the benefits of the restriction outweigh the costs to the community as a whole; and
- the objectives of the legislation can only be achieved by restricting competition.

Governments are required to develop a timetable for legislation reviews and, where appropriate, to reform all existing legislation that restricts competition by the year 2000. They must also publish an annual report on their progress towards this objective. If the review issue has a national dimension or effect on competition (or both), a national review may be determined. Without limiting the terms of reference, the review should:

- clarify the objectives of the legislation;
- identify the nature of the restriction on competition;
- analyse the likely effect of the restriction on competition and on the economy generally;
- address and balance the costs and benefits of the restriction; and
- consider alternative means for achieving the same result, including non-legislative approaches.

The Treasurer released on June 28 1996 a comprehensive schedule of Commonwealth legislation reviews to commence over the next four years, including reviews of Australia's ASAs and the International Air Services Commission Act. These two reviews were subsequently combined and referred to the Commission for inquiry on the 12 December 1997.

C THE AUSTRALIAN INTERNATIONAL AIR SERVICES MARKET

This appendix provides a statistical overview of the market for Australian international air services. Statistics are used to describe the nature of Australia's international scheduled passenger and freight markets, the charter market and passenger and freight movements at Australia's international airports.

C1 Australia's international air passenger market

International travel to and from Australia has more than doubled since 1986; inbound foreign tourism particularly has been a major source of growth. The most significant change in the composition of passengers arriving in Australia has been the substantial increase in the relative importance of the Asian market over the traditional European market. Arrivals from Japan experienced the strongest individual market growth since 1986. New Zealand has consistently been the largest individual passenger market.

Growth has been largely but not entirely driven by leisure travel. Strengthening economic links with Australia's Asian neighbours have also generated strong demand for business travel.

Australia's largest carrier, Qantas, had the highest individual passenger market share in 1997. The total market share attributable to Australian airlines has increased slightly since 1986.

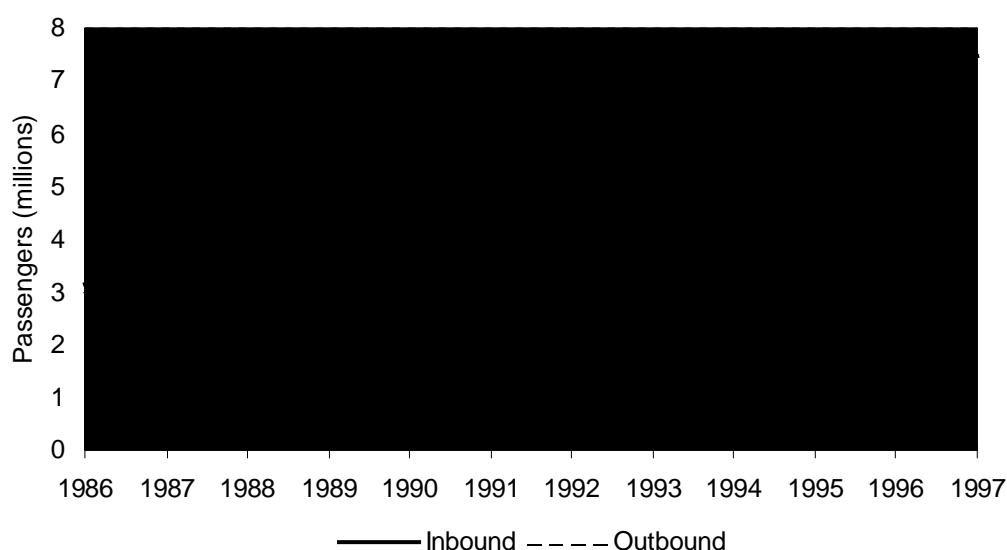
Total international passenger movements

The total number of passengers carried to and from Australia on both scheduled and non-scheduled flights increased from approximately 6.1 million in 1986 to 14.8 million in 1997.¹ This represented an average annual growth for inbound and outbound traffic of 8.3 per cent and 8.6 per cent respectively, where

¹ This included 14.1 million revenue passengers on scheduled flights and 700 000 passengers who were either non-revenue passengers (those who paid less than 25 per cent of the standard air fare as defined by ICAO) or passengers on charter flights (DTRD unpublished). The capacity approved for passenger charter flights was approximately 98 000 seats in 1997 (Figure C7); actual passenger numbers on charter flights would be expected to have been less. Thus, scheduled passengers comprised around 99 per cent of total passengers in 1996.

inbound traffic and outbound traffic refer to all passengers arriving at or leaving Australia respectively. The greatest annual increase occurred in 1988 — coinciding with the World Expo 88 and Bicentennial celebrations — when inbound traffic and outbound traffic increased by 15.3 per cent and 16.2 per cent respectively. Annual growth for inbound and outbound traffic slowed markedly in 1989 — partly as a result of the domestic pilots' strike — and in 1991, during the worst of the world wide recession (Figure C1). Passenger traffic then entered a period of strong growth.

Figure C1 International air travellers to and from Australia, 1986 to 1997



Note: Inbound and outbound passengers refer to the arrival or departure of Australian residents or overseas visitors, through Australian airports, which have been recorded on incoming or outgoing passenger cards.

Source: ABS 3401.0 (unpublished).

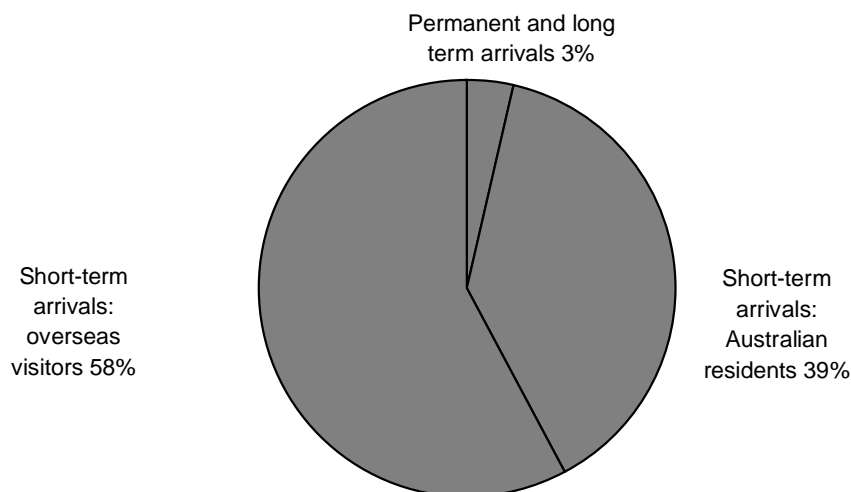
Inbound traffic

The 7.5 million arrivals in Australia in 1997 comprised around 4.4 million overseas visitors, 3 million returning Australian residents and around 78 000 permanent settlers (Figure C2). Around 97 per cent of the arrivals were short-term.

The growth in inbound traffic since 1986 largely reflects an increase in short-term overseas resident arrivals which have grown at an average annual rate of 10.9 per cent. This has led to a decline in Australian resident arrivals relative to overseas resident arrivals. In 1986 the number of Australian resident arrivals (around 1.5 million) was slightly greater than the number of overseas resident

arrivals (around 1.4 million) but the situation had reversed by 1997. Permanent arrivals have not changed greatly over the period.

Figure C2 Total air passenger arrivals, by category of movement, 1997

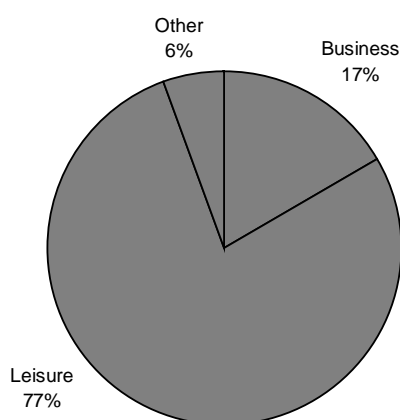


Note: Permanent arrivals (within the permanent and long-term arrivals category) include travellers who held migrant visas, New Zealand citizens who indicated an intention to settle, and those who were otherwise eligible to settle (such as overseas-born children of Australian citizens). Long-term arrivals (within the permanent and long-term arrivals category) include Australian residents and overseas visitors whose period of stay overseas or in Australia respectively was greater than 12 months.

Source: ABS Cat no 3401.0 (unpublished).

Travel for the purposes of leisure has accounted for the majority of the growth in short-term overseas visitor arrivals since 1989. Leisure has remained the most common purpose of travel for short-term overseas visitors over the decade. There were 2.1 million overseas visitors in 1989, of whom leisure accounted for around 1.6 million, business travel for 300 000 visitors and 'other' about 200 000. The number of *short-term* overseas visitors had grown to 4.3 million by 1997, of whom 3.3 million travelled for leisure, 700 000 travelled for business, and 240 000 were included in the 'other' category (Figure C3). Rounding errors account for the difference between the stated total and the sum of the three components.

Figure C3 Purpose of journey for short-term overseas visitors, 1997



Note: Business also includes travel for the purpose of convention/conference, employment and education. Leisure includes travel for the purpose of visiting friends/relatives and holidaying. Other includes other travel and purposes not stated.

Source: ABS Cat no 3401.0 (unpublished).

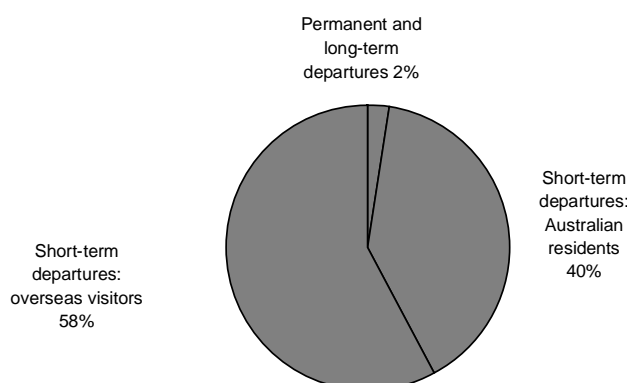
Outbound traffic

The 7.4 million departures from Australia in 1997 comprised around 4.3 million overseas visitors, around 3 million Australian residents visiting another country, and around 30 000 Australian residents intending to settle permanently in another country². Around 98 per cent of the departures were short-term (Figure C4).

The growth in outbound traffic since 1986 largely reflects an increase in short-term departures of overseas visitors, which have grown at an average annual rate of 11.3 per cent. This has led to a decline in Australian resident temporary departures relative to overseas visitor departures. In 1986, the number of Australian resident temporary departures (around 1.5 million) was slightly greater than the number of overseas visitor departures (around 1.4 million) but the situation had reversed by 1997. Permanent departures did not change greatly over the period.

² Rounding errors account for the difference between the stated total and the sum of the three components.

Figure C4 Total passenger departures, by category of movement, 1997

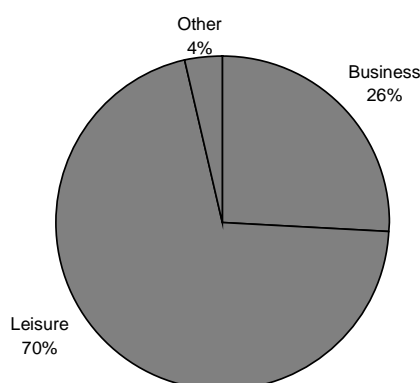


Note: Permanent departures (within the permanent and long-term departures category) are defined as Australian residents (including former settlers) who stated on departure that they intended to settle permanently in another country. Long-term departures (within the permanent and long-term departures category) include Australian residents and overseas visitors whose intended stay overseas or period of stay in Australia respectively was greater than 12 months.

Source: ABS Cat no 3401.0 (unpublished).

Travel for leisure is the major reason for short-term Australian resident departures. Leisure travel accounted for around 2.1 million of the approximate 2.9 million *short-term* Australian resident departures in 1997. Departures for business have grown as a proportion of the total, accounting for 26 per cent in 1997 (Figure C5), compared with 20 per cent in 1989.

Figure C5 Purpose of journey for short-term Australian resident departures, 1997



Note: Business also includes travel for the purpose of convention/conference, employment and education. Leisure includes travel for the purpose of visiting friends/relatives and holidaying. Other includes other travel and purposes not stated.

Source: ABS Cat no 3401.0 (unpublished).

Passengers by city pairs

Around 34 per cent of the total scheduled international passenger traffic to and from Australia in 1997 was between ten city pairs (Table C1). Sydney was Australia's main international gateway, with six of the top ten city pairs and all of the top five involving traffic to and from Sydney. Auckland and Singapore each appeared three times in the top ten city pairs. Singapore is a major hub for Qantas and the base for Singapore Airlines (which has 7 per cent of Australia's international passenger market) (Table C2).

Among the top ten city pairs, Los Angeles–Sydney had the largest increase in numbers of passengers between 1986 and 1997. Osaka–Sydney had the second largest increase in passenger numbers. Passenger numbers for Tokyo–Sydney increased rapidly from 1986 to 1990, rising from around 200 000 to around 507 000. The growth then levelled off as numbers began to rise rapidly for Osaka–Sydney — to around 327 000 in 1997. Traffic for Australia's top international city pairs was relatively small when compared with the busiest city pairs in the world. The busiest city pair in the world was Hong Kong–Taipei, with around 4.1 million passengers (in the year ended December 1995) compared with Sydney–Auckland's approximate 721 000 passengers (in the 12 months ending 31 March 1995) (ICAO 1996b).

Table C1 International–Australian city pairs by passengers

<i>City pair</i>	<i>Passengers 1986</i>	<i>Passengers 1997</i>	<i>Increase — 1986–97</i>	<i>Of total — 1997</i>
	no.	no.	%	%
Auckland–Sydney	610 302	749 137	23	5.3
Los Angeles–Sydney	155 290	703 281	353	5.0
Singapore–Sydney	301 084	562 450	87	4.0
Hong Kong–Sydney	243 726	513 448	111	3.6
Tokyo–Sydney	201 240	462 183	130	3.3
Singapore–Perth	184 282	423 035	130	3.0
Auckland–Brisbane	164 015	389 949	138	2.8
Auckland–Melbourne	156 849	354 810	126	2.5
Osaka–Sydney	0	326 935	na	2.3
Singapore–Melbourne	177 638	319 438	80	2.3
Other city pairs	3 624 011	9 297 244	157	65.9
All city pairs	5 818 437	14 101 910	142	100.0

na Not applicable.

a These data are for uplift/discharge traffic, the number of passengers who travel between a city pair on one stage. It differs from origin/destination traffic, which is the number of passengers who travel between a city pair at which their journeys start and finish. The data include only revenue passengers travelling on scheduled flights. Revenue passengers are defined as those paying 25 per cent or more of the standard air fare as defined by ICAO.

Source: DTRD (unpublished).

International passenger market share

During 1997, 52 passenger airlines operated scheduled services to and from Australia. This reflected an increase of 20 carriers operating in the Australian market since 1986, and can be associated with the growth in inbound tourism.

Ten of the 52 passenger airlines in 1997 accounted for around 82 per cent of Australia's international passenger market, and none of the remaining 42 airlines had more than 2 per cent of the total market. Qantas had the highest individual market share in that year (39 per cent), followed by Air New Zealand (10 per cent), Singapore Airlines (7 per cent), Ansett Australia and Japan Airlines (4 per cent) and United Airlines (4 per cent) (Table C2).

The Qantas market share had decreased from 42 per cent in 1986 which approximately equals Ansett's 4 per cent gain since it commenced international flights in 1993. Nevertheless the number of passengers flying Qantas more than doubled from 2.5 million to 5.4 million, reflecting the growth in the market.

Market shares also changed significantly for some of the other airlines during this period. Air Pacific and Continental Airlines dropped out of the top ten, being replaced by Japan Airlines and Ansett International. Japan Airlines' increased its passenger numbers by 427 per cent between 1986 and 1997, (the highest growth of comparable airlines) reflecting the growth of traffic between Japan and Australia. Japan Airlines' market share increased from 2.0 per cent to 4.4 per cent over the period.

Malaysia Airlines' share of the total Australian passenger market increased from 2.5 per cent in 1986 to 4.2 per cent in 1997 reflecting a percentage increase in passenger numbers of 310 per cent. United Airlines' market share increased from 2.8 per cent to 4.2 per cent over the period, while British Airways lost market share in going from 5.2 per cent to 3.3 per cent.

Table C2 Airline shares of Australia's international passenger market, 1986 and 1997

<i>Airline</i>	<i>Percentage increase in passenger numbers — 1986–97</i>	<i>Passengers — 1986</i>	<i>Market share — 1986</i>	<i>Passengers — 1997</i>	<i>Market share — 1997</i>
	%	'000	%	'000	%
<i>Australian airlines</i>					
Qantas Airways ^a	121	2 454	42.2	5 428	38.5
Ansett Australia	na	0	0.0	626	4.4
National Jet Systems ^b	na	0	0.0	4	0.0
Asian Express Airlines ^c	0	0	0.0	0	0.0
<i>Foreign airlines</i>					
Air New Zealand	102	671	11.5	1354	9.6
Singapore Airlines	126	416	7.1	940	6.7
Japan Airlines	427	118	2.0	621	4.4
United Airlines	260	165	2.8	594	4.2
Malaysia Airlines	310	143	2.5	587	4.2
Cathay Pacific Airways	86	269	4.6	500	3.5
British Airways	51	305	5.2	462	3.3
Garuda Indonesia	128	183	3.1	417	3.0
Other	135	1 095	18.8	2 571	18.2
Total	142	5 818	100.0	14 102	100.0

na Not applicable.

a Qantas data include its subsidiary Australia Asia Airlines.

b Service commenced January 1996.

c Dedicated freight only service commenced December 1996.

Source: DTRD (unpublished).

Australian passenger airlines (Qantas, Ansett International and National Jet Systems) accounted for just under 43 per cent of Australia's international passenger market in 1997 (Table C2). The Australian share of the international passenger market in 1986 was only slightly different at just over 42 per cent.

C2 Australia's international air freight market

The Australian international freight market has grown rapidly in recent years. The value of air freight transported in and out of Australia has more than doubled in the past decade. International air freight is predominantly carried in the belly holds of passenger aircraft, supplemented by dedicated freight services and additional informal freight charter flights. The main goods transported are low bulk and high value per kilogram. Sydney is Australia's most important air freight transport hub.

Qantas had the highest individual market share in 1997, carrying almost one third of all air freight transported.

International freight movements

Six dedicated freight carriers carried freight to and from Australia in 1997, along with 46 passenger airlines. The other six passenger airlines servicing the Australian market did not carry freight. Ninety per cent of air freight travels in the belly holds of passenger aircraft (sub. 52, p. 9).

International air freight — commodity shares

Goods transported by air freight are usually low bulk and high value, and/or time sensitive (including perishables). The Australian Chamber of Commerce and Industry (sub. 26, p. 8) indicated that Australia's primary air freight exports in 1994 included nonmonetary gold, perishable goods, and manufactures (including computer and office equipment, electrical machinery and appliances, non-metal manufactures and pharmaceuticals). Half of the perishables exported by air freight were seafood. Other important categories of perishables are fruit and vegetables, meat and flowers (HRSC 1996). Exports by weight are overwhelmingly perishable primary products (Qantas sub. 25, p. 5).

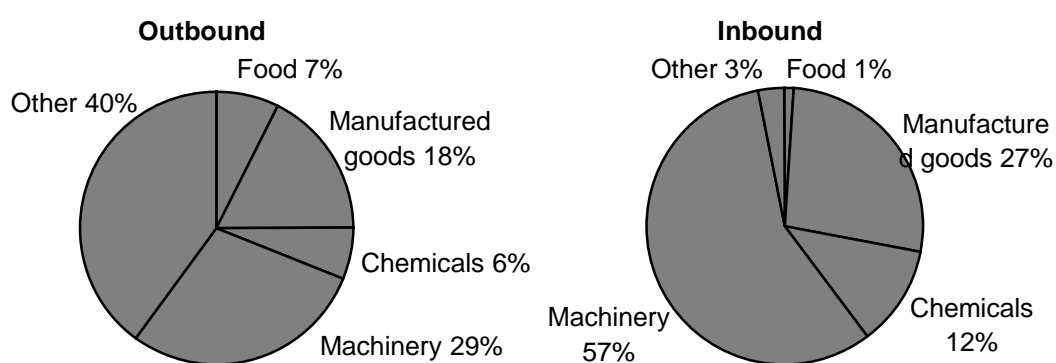
Imports transported by air freight mostly consist of high value, high technology manufactured goods, such as computers and other electronic parts (sub. 25, p. 5).

Machinery comprised 29 per cent of air freight exports and 57 per cent of air freight imports in 1996–97 by value (Figure C6). This included computers, other electronic parts, office machines, transport equipment parts and electrical machinery. Manufactured goods (including non-metal manufactures) comprised 18 per cent of exports and 27 per cent of imports. Chemicals, including pharmaceutical products made up 6 per cent of exports and 12 per cent of imports. The 'other' category (including nonmonetary gold) comprised 40 per cent of exports and 3 per cent of imports.

Freight by city pairs

The top ten city pairs for freight between Australia and foreign destinations accounted for around 47 per cent of the total scheduled freight (tonnes) carried to and from Australia in 1997.³ Just as Sydney is the major source or destination for passengers, so it is for freight (Table C3). Sydney was in all of the top three freight city pairs and five of the top ten freight city pairs in 1997. Auckland and Singapore each appeared three times in the top ten city pairs. They also both appeared twice in the top five city pairs. After Sydney, Melbourne is the most important gateway for freight. It appeared three times in the top ten city pairs for freight in 1997, compared with twice in the top ten city pairs for passenger traffic.

Figure C6 International air freight — commodity shares, 1996–97



Note: Figures are indicative only, because in adhering to legislative confidentiality provisions the ABS combines some of the international standard components to prevent disclosure. Data show the shares by value.

Source: ABS (1997b).

There was strong growth in freight transported between the top ten city pairs between 1986 and 1997 (Table C3). The largest percentage increase in tonnes of freight was for Auckland–Brisbane (303 per cent). However this was from a relatively low base.

Auckland–Melbourne also experienced strong growth over the period. Freight transported between the city pair grew by 24 000 tonnes (or 292 per cent). The next highest percentage growth was for Hong Kong–Melbourne (236 per cent).

Auckland–Sydney had the largest exchange of freight in 1986 as well as 1997 but its market share was larger in 1986 (9.8 per cent) than in 1997 (7.8 per cent).

³ It should be noted that city pairs do not necessarily reflect the origin of freight. Goods manufactured in Adelaide may be transported overseas via Melbourne, for example.

Table C3 Top ten Australian–international city pairs, by freight carried (tonnes), 1986 and 1997

<i>City Pair</i>	<i>Percentage growth — 1986–1997</i>	<i>Total freight — 1986</i>	<i>Total freight — 1997</i>	<i>Percentage of total — 1997</i>
	%	tonnes	tonnes	%
Auckland–Sydney	107	24 439	50 610	7.8
Singapore–Sydney	144	15 319	37 403	5.8
Hong Kong–Sydney	231	11 165	36 945	5.7
Singapore–Melbourne	201	11 254	33 910	5.2
Auckland–Melbourne	292	8 375	32 849	5.1
Hong Kong–Melbourne	236	8 277	27 787	4.3
Los Angeles–Sydney	113	12 059	25 732	4.0
Tokyo–Sydney	78	13 256	23 611	3.6
Singapore–Perth	93	11 827	22 784	3.5
Auckland–Brisbane	303	3 801	15 300	2.4
Other city pairs	166	128 966	342 441	52.7
All city pairs	161	248 739	649 371	100.0

Note: Data include freight carried on scheduled flights only.

Source: DTRD (unpublished).

International freight market share

The top ten carriers by freight (tonnes) accounted for around 80 per cent of Australia's international air freight market in 1997. None of the remaining 42 carriers had more than 2 per cent of the total market. This reflects a pattern similar to the international passenger market shares. Qantas had the highest individual market share in 1997 (29 per cent), followed by Singapore Airlines (12 per cent) and Air New Zealand (11 per cent), Cathay Pacific (8 per cent), Malaysia Airlines (4 per cent) and Japan Airlines (3 per cent) (Table C4).

The freight market shares of Qantas and Ansett have changed since 1986 in a similar way to their passenger market shares. The freight market share of Qantas decreased from 35 per cent in 1986 to 29 per cent in 1997. Ansett commenced international flights in 1993 and its market share increased to 4 per cent by 1997.

Other airlines in the top ten which experienced significant changes in market share were Cathay Pacific, Polar Air Cargo and British Airways. Cathay Pacific's market share increased from 5 per cent to 8 per cent and Polar Air Cargo's increased from zero to 3 per cent. British Airways, as with its passenger market share, lost freight market share, down from 5 per cent to 3 per cent.

Table C4 Carriers share of Australia's international freight market, 1997^a

<i>Airline</i>	<i>Freight</i>	<i>Market share</i>
	tonnes	%
Australian airlines		
Qantas Airways ^b	190 773	29.4
Ansett Australia	25 278	3.9
Asian Express Airlines ^c	8 064	1.2
National Jet Systems ^d	21	0.0
Foreign airlines		
Singapore Airlines	76 529	11.8
Air New Zealand	68 789	10.6
Cathay Pacific Airways	51 455	7.9
Malaysia Airlines	27 141	4.2
Japan Airlines	22 022	3.4
Polar Air Cargo	18 000	2.8
United Airlines	17 294	2.7
British Airways	15 954	2.5
Other	128 051	19.7
Total	649 371	100.0

na not applicable.

a Data include freight carried on scheduled flights only.

b Qantas data include its subsidiary Australia Asia Airlines.

c Service commenced December 1996.

d Service commenced January 1996.

Source: DTRD (unpublished).

The four Australian freight carriers (Qantas, Ansett, Asian Express Airlines and National Jet Systems) carried 35 per cent of Australia's international freight in 1997 (Table C4). Australian carriers had the same market share in 1986.

C3 Passenger and freight movements at international airports

Five of Australia's international airports handled 97 per cent of the scheduled international passenger traffic in 1997. Australia's busiest airport, Sydney's Kingsford Smith airport, had around half of total passenger and freight throughput (Table C5). Melbourne was the second busiest airport by passengers (2.4 million) and tonnes of freight (163 000). It was closely followed by Brisbane in passenger numbers (2.3 million) although Brisbane had only 74 000 tonnes of freight. Sydney and Melbourne together had 78 per cent of freight throughput and 66 per cent of passenger throughput.

Sydney's Kingsford Smith airport was consistently the busiest airport in Australia for both freight and passengers over the decade 1986–1997. Melbourne airport was the second busiest in terms of freight for the whole period of time, while Brisbane was catching up to Melbourne's passenger throughput. Adelaide airport was relatively stagnant in terms of growth in freight and passengers.

Table C5 International traffic at Australia's international airports, 1997

<i>Airport</i>	<i>Passengers</i>	<i>Percentage of total</i>	<i>Freight</i>	<i>Percentage of total</i>
	no.	%	tonnes	%
Sydney	6 879 040	48.8	341 553	52.6
Melbourne	2 370 948	16.8	162 500	25.0
Brisbane	2 285 798	16.2	73 511	11.3
Perth	1 399 514	9.9	45 971	7.1
Cairns	745 110	5.3	13 290	2.0
Adelaide	208 890	1.5	10 608	1.6
Darwin	171 319	1.2	1 765	0.3
Norfolk Island	16 176	0.1	144	0.0
Coolangatta ^a	13 822	0.1	0	0.0
Christmas Island ^a	3 895	0.0	21	0.0
Hobart	3 689	0.0	6	0.0
Port Hedland	3 209	0.0	0	0.0
Broome ^a	260	0.0	0	0.0
Townsville ^b	240	0.0	0	0.0
Total	14 101 910	100.0	649 371^c	100.0

Note: Data include passengers and freight on scheduled flights only.

a International operations commenced: Coolangatta Dec. 1996, Christmas Island Nov. 1993, Broome Jan. 1996

b International operations ceased October 1994.

c Numbers for individual airports do not exactly sum to the total due to rounding errors.

Source: DTRD (unpublished).

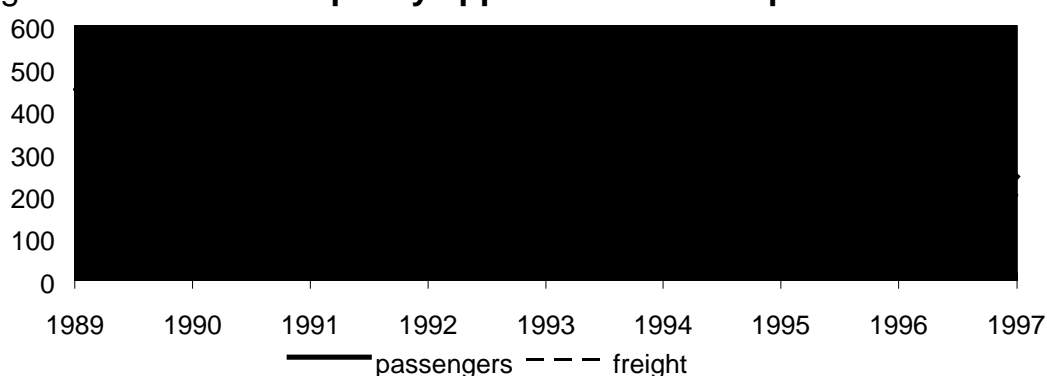
C4 Australia's international air services charter market

The charter market in Australia is small relative to the scheduled market. Passenger charter capacity approved was 245 Boeing 747 equivalent units (or approximately 98 000 seats) in 1997 (Figure C7). The total number of passengers who flew in and out of Australia in the same year (including passengers on scheduled flights) was 14.8 million. The seats available on these flights (which is a better figure for comparison with charter capacity approved) would have been even greater.

Freight charter capacity approved was also a small fraction of the freight transported on all international flights in 1997. Freight charter capacity approved in 1997 was 199 Boeing 747 equivalent units (equivalent to 19 900 tonnes). The amount of freight transported on scheduled flights was 649 000 tonnes (Table C4). Again, the capacity available on these scheduled flights would have been even greater.

An upward trend from 1990 to 1995 was apparent for passenger charter capacity approved (Figure C7). This was associated with the sustained high growth rates in passenger traffic after 1991 (Figure C1). This trend was followed by a pronounced downturn in approvals for passenger flights in 1997. This could partly reflect the completion of some market testing and development which began after the growth of inbound tourism in 1992. Charter flights may have been converted to scheduled flights or discontinued. By comparison, little discernible trend is evident for freight charter approvals.

Figure C7 Charter capacity approved in B747 equivalent units



Note: Figures are for the capacity approved only, so are only indicative of the capacity actually operated. Not all non-scheduled flights require approval — for example, programs of passenger charter flights by aircraft with a capacity of 10 or fewer seats do not require approval. Boeing 747 equivalent values for passenger services were calculated by totalling the number of seats available on charter passenger services approved and dividing by 400. Freight services were calculated similarly using a factor of 100 tonnes. When the number of seats or the tonnes of freight available on an aircraft was not clear, numbers were based on the normal seat configuration or payload.

Source: DTRD (unpublished).

D AUSTRALIA'S INTERNATIONAL TRADE AGREEMENTS COVERING SERVICES

Australia is party to a number of international trade agreements covering trade in services including the General Agreement on Trade in Services (GATS), the Asia-Pacific Economic Cooperation (APEC) Agreement and the Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA). However, only the ANZCERTA explicitly covers international air services. The other agreements either exempt or do not specify commitments related to air transport. This appendix provides a brief description of the agreements and their relevance to international air services.

D1 The General Agreement on Trade in Services

The GATS resulted from the Uruguay Round of multilateral trade negotiations concluded in 1994. Following the Uruguay Round, the World Trade Organization (WTO) was established as the institutional framework to oversee the GATS and the General Agreement on Tariffs and Trade (GATT).

All WTO members are required to accept the GATS along with the GATT as part of the so-called 'single undertaking' outcome of the round. Nonetheless, members have some discretion over the industry sectors to which the GATS rules apply.

Coverage

The objective of the GATS is to provide a discipline for removing measures that restrict trade in international services. Such measures covered by the agreement include laws, regulations, procedures, decisions and administrative action.

The GATS applies to four different modes of supplying services in the international market. These are:

- cross-border supply of services — that is, the supply of services from the territory of one member to the territory of another;
- cross-border consumption of services — that is, the consumption of services from the territory of one member in the territory of another member;

- commercial presence — that is, the commercial presence of suppliers from one member in another member's territory; and
- presence of a natural person — that is, the temporary movement of natural persons between members for the purposes of providing a service.

The GATS has a combination of general and specific commitments. Members' general commitments are to apply a set of general obligations and disciplines across all applicable services trade. Members' specific commitments are to apply 'market access' and 'national treatment' provisions to service sectors and sub-sectors which they nominate (subject to qualifications and conditions with respect to maintained measures, market access and/or national treatment) (Hoekman 1995).

General commitments

The GATS general commitments are intended to apply across all members and the majority of industry sectors. The core general commitment is the most-favoured nation (MFN) principle which requires that each service or service supplier from a member be treated no less favourably than any other foreign service or supplier (article II) (Hoekman 1994).

The MFN principle applies across all service types unless they were explicitly exempted by a member. Members cannot add exemptions after the agreement commences, and should remove them within ten years. Exemptions are also subject to review and negotiation in subsequent trade liberalisation rounds.

Another general obligation applies to the formation of regional trade agreements among members (article V). Such agreements must: involve substantial coverage across service sectors (and should not exclude any mode of supply); eliminate the majority of discriminatory measures among parties and/or prohibit new ones; and not raise the overall level of barriers in trade in services to outside parties for the sectors covered.

Members, when recognising other members' standards, are required to be non-discriminatory. They must not apply for the purposes of restricting trade. Other provisions relate to the transparency of all general measures and additional international agreements affecting trade in services.

A number of general commitments relate to the regulatory practices of members, some of which are only general in the sense that they apply to the service sectors actually scheduled by members. The other general commitments cover mainly transparency and competitive behaviour and safeguard measures which enable members to address balance of payments difficulties or to protect public morals, health, security, consumer protection and privacy.

Specific commitments

The specific commitments of GATS oblige members to apply the 'market access' (article XVI) and the 'national treatment' (article XVII) provisions to the service sectors which they schedule. Within each service sector, members can also list limitations on coverage by mode of supply and any particular protective measures which they wish to retain that serve to market access and/or national treatment.

Ninety service sectors are covered under the specific commitment provisions — or 58 per cent of the total services categories defined in the United Nations Central Product Classification. Sixty-two per cent of these commitments had no limitations imposed with respect to market access and 71 per cent had no limitations with respect to national treatment. Business services accounted for the highest percentage of specific commitments with no limitations (IC 1995).

Australia's commitments

Australia made few MFN exemptions under the general commitment provisions, and included a relatively high number of service sectors under the specific commitments provisions.¹ It has been argued that the commitments made imply little liberalisation of Australia's international trade in services (IC 1995). Australia's specific commitments include some services related to air transport (see below).

Australia maintained general rules on market access and national treatment across all sectors covered by its specific commitments. Like many other members, these apply conditions on foreign investment and the temporary movement of people (IC 1995).

Treatment of air services

Negotiations on air transport services as part of the Uruguay Round were difficult. The Department of Foreign Affairs and Trade (sub. 52) indicated that the main difficulty is reconciling the multilateral MFN-based GATS regime with the existing international air services system (which is based mostly on bilateral reciprocal regulatory arrangements).

¹ Under the MFN exemption provisions of the general commitments, Australia had submitted three exemptions as at 1 January 1995. These apply to audiovisual and financial services.

The GATS Annex on Air Transport Services specifically excludes traffic rights, however granted, and services directly related to the exercise of traffic rights.² Thus, the GATS does not affect obligations under bilateral agreements with respect to these services.

However, there are three exceptions to the Annex where GATS commitments do apply:

- aircraft repair and maintenance services (excluding line maintenance);
- selling and marketing of air transport services; and
- computer reservation system (CRS) services.

The nature of the GATS means that these services will only be covered to the extent that parties to the GATS agreement have listed or scheduled them as specific commitments. And relatively few countries have scheduled the above three categories of air transport services in the agreement (Hoekman 1995). Categories in which key GATS members have undertaken specific commitments and any listed MFN exemptions are summarised on Table D1.

Australia has scheduled aircraft repair and maintenance services and CRS services. Apart from the general conditions that apply to all sectors, the commitment for aircraft repair and maintenance services is unbound for cross-border supply because there is a 'lack of technical feasibility' (GATS 1994).

The GATS coverage of air transport services is limited but the Council for Trade in Services is committed to review periodically (and at least every five years) developments in the air transport sector and the operation of the Annex to consider widening the application of the GATS to the air transport sector. The GATS and the Annex on Air Transport Services are due to be reviewed in or by 2000.

² 'Traffic rights' are defined as the right for scheduled and non-scheduled services to operate and/or to carry passengers, cargo and mail for remuneration or hire from, to, within or over the territory of a member, including points to be served, routes to be operated, types of traffic to be carried, capacity to be provided, tariffs to be charged and their conditions, and criteria for designation of airlines (including such criteria as number, ownership and control).

Table D1 **Member countries' scheduled commitments for air transport services under GATS**

<i>Member</i>	<i>Repair and maintenance</i>	<i>Selling and marketing</i>	<i>Computer reservation systems</i>	<i>MFN exemptions</i>
Australia	Yes	No	Yes	No
Canada	Yes	No	Yes	Yes (tax) ^a
European Union	Yes	Yes	Yes	Yes (sales and marketing and CRS)
Hong Kong	No	No	No	No
India	No	No	No	No
Indonesia	No	No	No	No
Japan	Yes	Yes	Yes	No
Republic of Korea	No	Yes	Yes	Yes (CRS)
Malaysia	No	No	No	No
New Zealand	No	Yes	Yes	No
Philippines	Yes	Yes (general sales and cargo sales agency)	No	No
Singapore	No	No	No	Yes (CRS)
Switzerland	Yes	No	No	Yes (selling and marketing and CRS)
Thailand	Yes	Yes (includes CRS)	No	Yes (selling and marketing and CRS)
United States	Yes	No	No	Yes (selling and marketing and CRS)

Note: Does not describe the actual level of guaranteed market access and national treatment which a member has undertaken to provide in the services listed. These vary from member to member and can only be determined by examining each member's schedule of specific commitments.

^a Canada's MFN exemption on tax refers to exemption from taxes on income and capital of a non-resident person earned in Canada from the operation of aircraft in international traffic on the basis of reciprocity with the country in which the person resides.

Source: DFAT (sub. 52, pp. 4–5).

D2 Asia–Pacific Economic Cooperation Agreement

The leaders of APEC economies³ signed the Bogor Declaration in November 1994 agreeing to work towards the goal of free and open trade and investment by 2010 for industrialised economy members and by 2020 for the developing economy members. The following year, member economies outlined a range of liberalisation, facilitation and economic and technical cooperation initiatives in the Osaka Action Agenda which gave effect to the Bogor Declaration. Members, at subsequent meetings in Manila in 1996 and Vancouver in 1997, reaffirmed and detailed actions and commitments taken to implement the Osaka Action Agenda.

Coverage

The Osaka Action Agenda comprises general principles, a framework for the process of implementation, and specific actions directed at achieving liberalisation and facilitation of trade and investment among APEC member economies. Unlike WTO agreements, the resolutions are not binding on members and there is no scope for sanctions against non-complying members.

The general liberalisation and facilitation principles in the Osaka Action Agenda include:

- comprehensiveness, whereby liberalisation and facilitation are directed at addressing all impediments to trade and investment;
- consistency with the WTO framework of trade liberalisation;
- comparability of trade and investment liberalisation and facilitation;
- non-discrimination among members and a commitment to reduce barriers with non-APEC economies as well as with APEC economies;
- transparency of laws, regulations and administrative procedures which affect the flow of goods, services and capital among members;
- restraint from using measures that would effectively increase levels of protection;
- simultaneous, continuous and differentiated timetables for the process of liberalisation, facilitation and cooperation;

³ The APEC member economies party to the Bogor Declaration are Australia, Brunei, Canada, Chile, China, Chinese Taipei, Hong Kong, Indonesia, Japan, Malaysia, Mexico, New Zealand, Papua New Guinea, Philippines, Singapore, the Republic of Korea, Thailand and the United States. Peru, Russia and Vietnam were admitted as APEC member economies in November 1997.

- flexibility in the issues regarding the liberalisation and facilitation process, reflecting the diverse nature of the members; and
- economic and technical cooperation to aid liberalisation and facilitation.

APEC member economies also agreed to undertake specific actions across a range of trade and investment matters or other policies that bear on trade and investment. Concerning services, members agreed to reduce restrictions on market access progressively, and to provide for MFN and national treatment for trade in services. The guidelines for achieving this specify that each APEC economy should contribute positively to the WTO negotiations on trade in services, expand commitments under the GATS on market access and national treatment, eliminate MFN exemptions where appropriate, and consider further actions to facilitate supply of services. Members also agreed to undertake 'collective actions' in some services, including transportation.

Specific agreements about investment, competition policy and deregulation also may directly affect services and transportation. The agreement covering investment requires members to work towards liberalising their investment regimes and provide for MFN and national treatment. With regard to competition policy, members agreed to aim to introduce or maintain effective and adequate competition policy and/or laws and associated enforcement. Under the deregulation agreement, members will endeavour to eliminate trade and investment distortions arising from domestic regulations. However, the collective actions under these agreements largely comprise commitments to develop dialogues and to improve information on these matters.

The economic and technical cooperation component of the Osaka Action Agenda is an agreement to pursue such cooperation to achieve growth and development objectives in the region, including the growth of trade and investment. Thus, members agreed to support the effective operation of market mechanisms.

Supporting the general economic and technical cooperation initiative, members agreed to a number of common policy concepts under specific areas, including transportation.

Treatment of air services

Unlike the GATS, the APEC agreement does not exclude air transport. However, the non-binding nature of the agreement limits its scope to achieve multilateral or plurilateral liberalisation of international air services in the region.

Members agreed (under the Osaka Action Agenda) on transportation initiatives, including resolutions about air transport. Potentially relevant resolutions under the liberalisation and facilitation component include:

- promotion of the implementation of International Civil Aviation Organization (ICAO) standards, regulations and safety measures;
- examination of the possibility of taking appropriate steps to facilitate privatisation or corporatisation of transportation infrastructure projects; and
- elimination within 10 years of requirements for paper documentation of the key measures relevant to international transport and trade.

The economic and technical cooperation component calls members to seek to develop an efficient, safe and integrated regional transport system. Potentially relevant priorities include:

- facilitating the harmonisation, coordination and transparency of transport policies, regulations, procedures and standards;
- promoting timely rational investment in the transport infrastructure;
- encouraging the efficient use of existing infrastructure through the application of appropriate trade and transport facilitation techniques;
- promoting transport system safety and security;
- promoting fair and equitable access to markets and a more competitive transportation operating environment and cooperating to address institutional constraints which affect the provision of transportation services; and
- facilitating the improvement of productivity, skills and the efficiency of labour and management in the transport industry.

Members agreed on several joint activities or dialogue to support these priorities including exploratory initiatives for airport congestion, aviation safety and security, and future consideration of a consultation mechanism through which to develop a well-integrated regional transport infrastructure.

APEC Transportation Working Group

The APEC Transportation Working Group established the Air Services Group (ASG) to identify prospects for liberalising international air services consistent with APEC objectives.

The ASG identified eight options for more competitive air services with fair and equitable opportunity for all member economies, including:

- air carrier ownership and control;
- tariffs;
- ‘doing business matters’ related to commercial operations of airlines;
- air freight;
- multiple airline designation;
- charter services;
- airline cooperative arrangements; and
- market access.

APEC Transport Ministers endorsed these eight options in 1997, and reconvened the ASG to analyse and prioritise the eight options and develop recommendations about the options, including how they should be implemented.

The Department of Foreign Affairs and Trade (sub. 52) indicated that Australia has been actively involved in the process through the Department of Transport and Regional Development. The ASG met in October 1997 and February 1998 to present its report on the options outlined above. One recommendation was the progressive removal of restrictions on freight services, including the separation of freight and passenger capacity in ASAs.

Recent liberalisation initiatives by individual members which have occurred in the context of APEC include a commitment by the Republic of Korea to liberalise air freight handling services by 1997 and to allow a foreign equity ratio in air transport of up to 50 per cent by 2000, a grant of permission by Chinese Taipei for foreign firms to set up travel agencies, and an offer by the United States to negotiate bilateral ‘open skies’ agreements with APEC partners (APEC 1996).

The Department of Foreign Affairs and Trade (sub. 52) argued that the APEC forum provides an opportunity for a cooperative and constructive approach to liberalisation of aviation services, but that the sensitive nature of air services issues and the consensus-based approach to APEC decision making are likely to limit the pace and direction of aviation reform in APEC.

D3 Australia–New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)

The ANZCERTA came into effect in January 1983 with the objective of liberalising bilateral trade between Australia and New Zealand. In February 1992, the Australian Government announced changes to the regulation of

international air services, including a proposal to establish a single aviation market between Australia and New Zealand under the framework of the ANZCERTA.

Australia and New Zealand incorporated the Single Aviation Market (SAM) arrangements into the ANZCERTA in November 1996 to liberalise aviation services within and between each country.

The Single Aviation Market (SAM)

The Australia–New Zealand Single Aviation Market Arrangements liberalised air services between and within the two countries. The key provisions of the arrangements include:

- allowing any authorised airline⁴ to fly unrestricted between Australia and New Zealand;
- permitting any such authorised airline to operate domestic services in Australia and New Zealand, and to carry domestic passengers on international services between airports approved for international services in each country;
- not limiting the number of authorised airlines that can operate services linking any city pair combinations within and directly between the two countries, nor the passenger or freight capacity on such routes;
- not requiring tariffs charged by authorised airlines to be approved by national aeronautical authorities;
- permitting codesharing between authorised airlines (subject to relevant disclosure requirements);
- committing to adopt a liberal approach to the market's charter operations; and
- subjecting all aviation activities (including terminal access) under the arrangements to competition law as it applies in the relevant jurisdiction (Ministry of Foreign Affairs and Trade (NZ) 1996).

⁴ An authorised airline under the SAM arrangements must meet the ownership and control requirements of the agreement or otherwise be approved by the ministers responsible for civil aviation in both countries. It must also meet operational requirements covering security, insurance, noise and operational authorisations from both countries. The ownership and control requirements for such an airline are: at least 50 per cent ownership and effective board control must be held by nationals from either country; at least two thirds of board members must be nationals of either country; the chairperson of the board must be a national of either country; and the airline's head office and operational base must be in either country.

The SAM arrangement significantly liberalises air services between the two countries, but it does not completely override the 1961 Air Services Agreement between Australia and New Zealand. For example, it maintains restrictions on beyond rights for both Australian and New Zealand carriers to fly to other third countries as established in the 1992 Memorandum of Understanding (Ministry of Foreign Affairs and Trade (NZ) 1996). Entitlements for Australian and New Zealand carriers to fly to other countries also continue to be governed by each country's ASAs.

E AUSTRALIA'S INTERNATIONAL AIR SERVICES ARRANGEMENTS

E1 Introduction

Australia operated air services arrangements (ASAs) with 51 countries, as at February 1998 (Table E.1). These arrangements typically comprise an Air Services Agreement¹ (which is regarded as an international treaty and is ultimately enforceable under international law), a Memorandum of Understanding and/or an exchange of letters.

The Department of Transport and Regional Development (DTRD sub. 33) indicated that provisions typically contained in Australian ASAs include:

- a guarantee of fair and equal opportunity for airlines designated under the agreement;
- agreement that designated carriers are substantially owned and effectively controlled by citizens of the contracting parties;
- agreed principles for regulating capacity and tariffs;
- rights granted for the designated carriers of one party to conduct business in the country of the other party;
- protocols on airworthiness and safety;
- agreement to cooperate on aviation security;
- exemption from duty by both parties for aircraft fuel, spare parts and supplies used by airlines of the other party;
- descriptions of the routes over which agreed services can operate (usually contained in an annex); and
- an agreement that both parties will amend the ASA to conform with any matter covered by any multilateral agreement into which both parties have entered.

This appendix highlights the main provisions typically contained in Australia's ASAs and the significant differences among individual arrangements. It includes

¹ Australia's Air Services Agreements generally consist of a series of articles (or provisions) and one or more annexes. The most common annex is the route annex which specifies the routes available to designated carriers under the agreement.

a table that summarises the existing capacity entitlements under Australia's ASAs and the current use of those entitlements.

E2 Designation and authorisation

Australia has pursued a policy of multiple designation of its own international carriers since 1992. Qantas was previously the only Australian carrier authorised to operate international services. Multiple designation has now been incorporated into most of Australia's recently amended or negotiated ASAs. However, as at August 1998, single designation for Australian carriers still existed under arrangements with seven countries and dual designation existed in arrangements with two countries.

Designation and authorisation articles under Australian ASAs establish the number of airlines which one contracting party can designate to the other to operate agreed services and when airlines become authorised to operate services.

Authorisation occurs when the other contracting party is satisfied that the designated airline is qualified to meet certain conditions. These typically require substantial ownership and effective control of airlines to be vested in the nationals of the contracting party. Other typical conditions include airworthiness standards and compliance with the laws and regulations of the receiving party. The suspension or revocation of authorisation is allowed under similar conditions.

To establish that they are substantially owned and effectively controlled by Australian citizens, Australian international carriers must satisfy a number of requirements specified by the Commonwealth Government. These requirements were set out in a policy statement issued on 22 December 1992 by the then Minister for Transport and Communications, and include the following:

- at least two thirds of the Board members must be Australian citizens;
- the Chairperson of the Board must be an Australian citizen;
- the airline's head office must be in Australia; and
- the airline's operational base must be in Australia.

Further, the *Air Navigation Act 1920* prevents foreign airlines from holding more than 35 per cent in aggregate of equity (with a limit of 25 per cent on the total shareholding of any single foreign airline). This does not apply to Qantas.

The *Qantas Sale Act 1992* incorporates the above restrictions, with two additional provisions: foreign persons cannot hold more than 49 per cent of

equity and Qantas is prohibited from taking any action to become incorporated outside Australia.

The restrictions imposed by Australian authorities on the ownership and control of Australian airlines do not automatically establish the authorisation of the airlines under Australia's ASAs. The foreign authorities must find the ownership and control of the airlines acceptable before they will be authorised under each ASA.

E3 Tariffs

A tariff article in ASAs establishes procedures for setting airfares on the agreed services. DTRD (sub. 33, p. 16) indicated that Australia has several different tariff regimes in its ASAs, based on the number of states that must approve the regime before it becomes effective. As at April 1998, these were:

- double approval — in which both states must approve a tariff; found in 34 of Australia's ASAs;
- country of origin — in which only the state in which the transportation originates needs to approve the tariff; found only in Australia's agreement with the United States;
- no approval needed — found only in Australia's agreement with New Zealand; and
- double (or dual) disapproval — in which both states concerned must disapprove a tariff to prevent it from coming into effect; found in 15 of Australia's ASAs.

DTRD indicated that double disapproval is its preferred method for Australian ASAs. It also indicated that Australia's policy is for tariff setting to be based on the airlines' commercial judgment, not government regulation (unless the competition authorities detect anticompetitive intent) (sub. 33, p. 16).

E4 Capacity

Australia's ASAs typically include a capacity article which states that capacity entitlements will be established and varied by an exchange of letters and/or Memoranda of Understanding. This allows changes to capacity entitlements without changes to the Air Services Agreement (which would require ratification by the Senate). Capacity entitlements are determined in this way for two reasons: first, capacity arrangements may be changed quickly; and second, capacity is the most frequently renegotiated provision in agreements. Capacity

was renegotiated with Australia's bilateral partners more than 63 times between January 1992 and September 1997. Capacity entitlements negotiated under Australia's ASAs for both Australian and foreign carriers are set out in Table E.1.

The capacity article also generally states that there will be fair and equal opportunity for designated airlines to operate the agreed services. This seeks to guard against discrimination and unfair competitive practices by the other contracting party. Often an additional clause specifies that airlines operating on the same routes will avoid unduly affecting the services of their competitors from the other country. This is intended to give governments an avenue to follow if the conduct of an airline is found to be unacceptable. Dumping is an example of conduct to which this clause could apply.

Capacity arrangements for passengers may be specified in terms of the number of seats, aircraft types (for example, Boeing 747s), units and/or frequencies that may operate on each agreed route each week. The capacity entitlements for designated carriers of each country under Australia's ASA with Canada, for example, are 1 660 seats per week. But Australia's ASA with Indonesia states 27 Boeing 747s per week (Table E.1). If an ASA uses numbers of aircraft types per week, it typically includes conversion formulae to allow for alternative aircraft to be used. The only Australian ASA to include market driven entitlements is that with the United States: additional capacity becomes available to airlines under this ASA if demand has grown and other conditions are met.

The capacity allowed as at 20 June 1998 for either home or foreign countries' carriers was almost entirely used under the ASAs with some countries (Table E.1). However, this does not imply that these flights were full. Australian carriers had no remaining flight capacity to Italy² and little capacity left to Hong Kong, India, the Philippines and Taiwan. Further, there was no additional capacity remaining for foreign carriers from Italy, Austria and Dubai and little available for airlines from Malaysia, Hong Kong and Singapore. Overall, capacity available was well ahead of passenger numbers (Figure 5.1).

Australian ASAs generally provide for codesharing. The amount of capacity used for codesharing on a flight is usually counted against the country of the airline selling the ticket. However, arrangements for codesharing may differ among agreements. Some arrangements may count a minimum number of seats or fraction of aircraft equivalent units on each flight as codeshared capacity. A minimum of 100 seats of its capacity may be attributed to airline A, for

² Australia is currently holding negotiations with Italy.

example, even though it has only sold five seats. This may have the effect of preventing prospective carriers from using capacity under the same agreement.

Australian ASAs sometimes also provide for third country codesharing. Third country codesharing generally makes two allowances: first, it allows designated carriers to use capacity entitlements negotiated under the ASA by codesharing on services operated by a third country carrier; and second, it allows third country carriers to codeshare on services operated by carriers designated under the ASA using capacity entitlements negotiated under the ASA. There are sometimes restrictions on third country code sharing although they are becoming less common.

Capacity under many Australian ASAs can be used for either passengers or freight. When capacity is specified in terms of numbers of passenger seats, there may be a substitution formula for passenger seats and freight.

The Commonwealth Government has increasingly sought to negotiate separate entitlements for dedicated freight services. As at March 1998, there were over 50 Boeing 747 equivalents per week of dedicated capacity under 18 of Australia's bilateral agreements (DTRD sub. 33). Australia also recently negotiated an ASA with Luxembourg which provided unrestricted rights for the operation of dedicated freight services.

E5 Route rights

Australia's ASAs generally restrict the points in Australia available to foreign carriers. This may occur in a number of ways. Some arrangements allow foreign carriers to operate services to a choice of certain destinations in Australia — for example, the agreement with Kuwait specifies that any two points in Australia are available. The choice of points may also be restricted to a list. Alternatively, the ASA may restrict a foreign carrier's operations to a discrete list of points with no option to operate to unlisted destinations in Australia — for example, Mauritian carriers are unable to operate services to Sydney because Perth and Melbourne are the only points specified in the agreement.

Most Australian ASAs provide fifth freedom rights. These may include rights for intermediate points between the two countries or beyond points. The use of fifth freedom rights under an ASA depends on the approval of the third country — for example, Singapore is allowed as an intermediate point under the Australia–UK agreement. This alone does not allow Australian airlines to use Singapore as an intermediate point on the way to the United Kingdom; this route is only available because the United Kingdom has agreed to it and specified it as a beyond point under the Australia–Singapore agreement.

The capacity available for fifth freedom points is sometimes subject to restrictions in addition to those that apply to third and fourth freedom traffic. The capacity available for third and fourth freedom traffic under Australia's ASA with New Zealand is unrestricted, but capacity for fifth freedom traffic is restricted to the equivalent of 12 Boeing 747 flights per week.

E6 Consultations, amendments and settlement of disputes

ASAs establish the process for future consultations and amendments of the arrangements. It is usually agreed under Australian ASAs that discussion or correspondence must begin within a certain time period after the receipt of a request for consultation unless mutually decided by the contracting parties. Amendments are usually allowed at any time by agreement in writing. Also, ASAs typically include a clause noting that the arrangements will be amended to conform with any multilateral agreement into which both parties have entered. A 'settlement of disputes' article provides for procedures for resolving disputes. These procedures, which commonly include consultation and arbitration, are provided as a last resort.

F MODELLING THE EFFECTS OF LIBERALISED INTERNATIONAL AIR SERVICE AGREEMENTS

The objective of the modelling reported in this appendix is to assess the effects of Australia's international air services arrangements (ASAs) on the market for air travel to and from Australia. Specifically, the project aims to:

- assess how the entry of a new Australian international carrier such as Ansett International affects competition, prices, Australian and foreign economic welfare, and passenger travel to Australia in relevant markets;¹ and
- illustrate how efficiency and competitive gains from an open club agreement can affect the economic welfare of open club members.

Model results suggest that the entry by Ansett International into the markets considered has resulted in price reductions and increases in passenger travel and Australian and foreign economic welfare. Model results also illustrate how open clubs, which promote efficiency gains and free airlines from the constraints of bilateral agreements, can increase the economic welfare of club members.

This study adopts a spatial equilibrium modelling approach whereby airlines use their flight networks to move passengers from their origins to their destinations. Prices and airline networks are estimated in an equilibrium that explicitly accounts for the demand for air travel, the costs and operation of airline networks and the strategic interactions of airlines. A technical paper supporting the modelling is available from the Commission on request and on the Commission's webpage (PC 1998).

An Independent Review Panel was appointed to comment on the modelling work in accordance with requirements under the *Productivity Commission Act 1998*. Panel members' reports can be found in Attachment F1. The Commission thanks Qantas Airways, Ansett International, the Department of Transport and Regional Development and the Bureau of Transport Economics for their assistance with data and their comments on the modelling framework. It also thanks the participants at the technical seminar and modelling workshop for their comments.

¹ In this study, the term 'price' denotes net airfares, which are fares exclusive of discounts but inclusive of sales commissions and overrides. Overrides are special conditions on discount tickets — for example, for passengers who stay overnight on a Saturday.

The appendix is organised as follows. Sections F1 to F4 introduce the modelling framework, the flows of passengers by country and airline, the demand for air travel, and network specification respectively. Sections F5 to F7 outline airline behaviour, model validation and economic welfare estimates. Finally, sections F8 and F9 present the results of scenarios modelling the effects of ‘Ansett’s entry’ and plurilateral open club, respectively.

F1 Modelling framework

A review of the literature shows that three main approaches have been used to determine the factors that affect prices in air travel markets (PC 1998). The first approach uses econometric methods to test statistically whether market concentration, demand and cost variables together explain prices better than demand and cost variables alone. The second approach is also econometric. It focuses either on estimating the extent of economies of density or of scale in airline networks, or on estimating productivity differences between airlines. The third approach is based on spatial modelling, and is the approach adopted in this study.

The conceptual framework embodied in the model draws on three articles. The demand specification, drawing on Gillen, Harris and Oum (1997), assumes that airlines’ services are imperfect substitutes for each other and that customers care about the price and non-price attributes of travel (for example, the frequency of service).

The market behaviour of airlines draws on Lederer (1993) who showed the existence of a (unique) non-cooperative equilibrium in an airline model that can be adapted to the purposes of this study. His demand specification differs from that of Gillen, Harris and Oum but also assumes that airlines compete in price and non-price attributes of travel.

The specification of the airlines’ networks draws on the work of Hendricks, Piccione and Tan (1995). It internalises network design and disentangles the network passenger flows from passenger demand within an imperfectly competitive framework.

The model is subject to a number of limiting assumptions:

- it captures the industry at a point in time;
- there are no economic conditions for airline entry or exit;
- slot and gate constraints are not taken into account; and
- negotiated capacity exceeds airline demand.

The first two limitations imply that the model is a comparative static, short-run model. No dynamic investment or entry and exit decisions are made. The third limitation exists because the lack of city designation of passengers in the data excludes estimation of any efficiency losses that may result from capacity-constrained airports or from negotiated restrictions on city access. The fourth limitation implies that negotiated flight capacities are not binding constraints on airlines' networks.

F2 Passenger flows by country and airline

Airlines offer a range of services, including scheduled passenger services, freight and mail services, non-scheduled passenger services and incidental services. Each service generates revenue. However, scheduled passenger services provide most airline revenue and as confirmed by industry dictate network configuration in conjunction with ASAs. Consequently, the network model developed in this appendix concentrates on scheduled passenger services with adjustments to airline costs to account for the absence of other revenue sources in the model (Section F4). It should be noted that the total gains from liberalisation estimated in the model exclude any collateral gains to freight and mail services.

There are two sources of passenger movement data. The first source is airline uplift–discharge information. It is an incomplete record of passenger journeys for two reasons. First, it records people carried on planes between two cities without regard to their initial origin or final destination. Second, it is generally available for many foreign airlines on only one leg of the passenger journey. Singapore Airlines, for example, offers Australians many passenger destinations, but it only reports passenger numbers on flight legs between Australia and Singapore. The second and better source of passenger movements is a survey of responses by travellers for their origin–destination travel by airline. The data are compiled in Avstats (DTRD 1998). Passenger data are for 1995, so that they are consistent in the model with the most recently published International Civil Aviation Organization cost data (ICAO 1996b). However, data for 1997 are used for some simulations.

Country coverage

Two levels of country coverage were used for this study. The broadest coverage aimed to test the robustness of the model for international travel to and from Australia. A narrower coverage was adopted for policy simulations to maintain

numerical tractability in the model while allowing for any possible network effects of possible liberalised ASAs (Section F6).

The broadest coverage includes routes for travel to and from Australia for 12 foreign destinations. Nine correspond to countries or economies — Japan, the Republic of Korea, Hong Kong, Taiwan and China in North Asia, and Indonesia, Malaysia, Singapore and Thailand in South-East Asia. The other three correspond to regions — North America (the United States and Canada), the United Kingdom/Ireland and the Rest of Europe.

Country pairs rather than city pairs were chosen for demand because the Avstats passenger data for individual airlines were only available on a country pair basis. This is not an issue for many foreign countries because there is only one major airport (for example, in Hong Kong, Singapore, the Republic of Korea, Taiwan, Thailand and Malaysia). However, the cost data used in this study are city based. Therefore representative cities must be chosen for the other countries. They are Sydney (Australia), Beijing (China), Tokyo (Japan), Jakarta (Indonesia), Los Angeles (North America), London/Heathrow (United Kingdom/Ireland) and Rome (Rest of Europe).

The broadest market coverage captures 78 per cent and 91 per cent of Australian resident and foreign visitor passenger movements between Australia and the relevant country, respectively (excluding New Zealand). New Zealand is excluded because travel between Australia and New Zealand is not subject to capacity constraints, although fifth freedom restrictions to third countries apply.

The Japanese, North American and European markets are by far the largest markets (Table F1). Inbound foreign visitor flows dominate outbound Australian resident flows in nine of the 12 markets. Japan, the Republic of Korea, Singapore and Taiwan are particularly oriented towards foreign visitors. In contrast, Malaysia, North America, Thailand, United Kingdom/Ireland and Rest of Europe are only slightly tilted towards foreign visitors. Australian resident movements exceed foreign visitor movements in the remaining four markets (including the rest of the world), although only marginally for China and Hong Kong.

Table F1 **Passenger movements to and from Australia by market, 1995**

<i>Between Australia and:</i>	<i>Australian resident</i>	<i>Foreign visitor</i>	<i>Total^a</i>
	'000	'000	'000
China	108	88	197
Hong Kong	313	284	597
Indonesia	452	282	734
Japan	88	1573	1660
Malaysia	183	228	410
North America	721	731	1452
Korea, Republic of	28	338	366
Singapore	193	414	607
Taiwan	59	308	366
Thailand	153	166	319
United Kingdom/Ireland	599	745	1344
Rest of Europe ^b	544	784	1329
Rest of world ^c	955	576	1531
Total	4396	6517	10912

a Numbers may not sum to total as a result of rounding error.

b Includes former USSR.

c Excludes New Zealand.

Source: DTRD (1998).

Airline coverage

Avstats origin–destination data show that passenger origin–destination travel between two countries is dominated by their national carriers. The remaining market share is distributed to a large number of third-country carriers, some of which are important competitors. The modelling problem is to incorporate the important third-country competition while keeping the problem numerically tractable. This is achieved by omitting from a market those third-country airlines that have a marginal impact on the model solution. The rules used in this study for airline inclusion/exclusion are found in PC (1998).

The model's depiction of airlines' shares of the total traffic to and from Australia and the number of markets served by airline are presented in Table F2. Model shares overstate those observed in Avstats data, while the model's

number of markets served understate those observed in Avstats data because of the exclusion of third-country carriers that have marginal influence.

Table F2 Model market share by airline in travel to and from Australia by market based on 1995^a

<i>Airline</i>	<i>Total share</i>	<i>Home market^b</i>	<i>Markets served</i>
	%	%	no.
Qantas	43.1	43.1	12
Singapore Airlines	8.1	37.7	12
Japan Airlines	5.8	26.2	5
Cathay Pacific Airways	5.7	40.2	8
Air New Zealand	5.2	na	9
United Airlines	4.5	28.3	1
British Airways	4.4	16.4	5
Garuda Indonesia	4.1	34.1	4
Malaysia Airlines	4.0	51.2	7
Ansett Australia	3.8	3.8	6
Thai Airways International	1.7	29.5	4
Korean Air	1.7	34.1	2
All Nippon Airways	1.7	8.7	2
Alitalia	1.2	6.9	3
KLM	1.0	4.5	2
Sempati Air	0.9	10.9	1
Olympic Airways	0.8	5.2	3
EVA Airways	0.8	18.0	2
Lufthansa	0.6	4.5	2
Mandarin	0.6	13.2	1
Lauda Air	0.4	2.5	2
Air China	0.3	15.0	1

a To illustrate the contents of the table, consider Singapore Airlines. Singapore Airlines carried 8.1 per cent of the total passengers in and out of Australia and 37.7 per cent of the passengers who cited Singapore as their origin or ultimate destination. Markets comprise Japan, the Republic of Korea, Taiwan, China, Hong Kong, Malaysia, Singapore, Indonesia, Thailand, North America, United Kingdom/Ireland and Rest of Europe.

b British Airways' share was calculated using the United Kingdom/Ireland market. Other European carriers were calculated using the Rest of Europe market.

Source: DTRD (1998).

Qantas dominates total flows but each national airline is significant for travel between its own country and Australia. Airlines in the model that compete with Qantas in most markets are Cathay Pacific Airways, Air New Zealand and Singapore Airlines. Japan Airlines, Malaysia Airlines, Ansett International, British Airways and Thai International compete with Qantas in approximately half the markets. The remainder compete with Qantas in only a few markets.

In total, the model with broadest coverage has 21 airlines serving 12 markets although most markets are served by only a few airlines. The model captures at least 93 per cent of the passengers travelling on the route for all routes except United Kingdom/Ireland and Rest of Europe (Table F3). Policy simulation results do not depend on these two countries.

Table F3 Model share of total passenger movements by route based on 1995

<i>Between Australia and:</i>	<i>Model coverage</i>	<i>Airlines serving the market</i>
	%	no.
China	96	11
Hong Kong	98	6
Indonesia	94	5
Japan	98	8
Malaysia	93	5
Korea, Republic of	97	6
Singapore	94	5
Taiwan	98	7
Thailand	97	8
North America	93	5
United Kingdom/Ireland	85	14
Rest of Europe	79	14

Source: Commission estimates.

F3 Demand for air travel

Aggregate demand for air travel is influenced by many factors including:

- prices by airline and class of ticket;
- passenger type by price sensitivity, time sensitivity and frequency;
- seasonal demand factors;

- frequency of departures/arrivals;
- time flown;
- number of stops;
- city of origin and destination; and
- nationality of carrier.

Behavioural parameters for these factors are difficult to estimate. One reason is that the interests of passengers largely coincide with those of the airlines for some factors. For example, passengers typically want the shortest flight with the fewest stops. Airlines that minimise costs subject to hub-and-spoke cost considerations fly more direct routes with shorter flight times and fewer stops. Estimation is further complicated by the lack of observed differences in air services by airline and in the prices paid for the air services by airline. Only by observing differences in prices and services can the effect of these demand factors can be estimated.

Demand in the model can be viewed as a two step process. Travellers decide whether to travel to a given destination based on an average, quality-adjusted price of travel to the destination. They then decide which airline to fly based on the airlines' relative price and frequency of service. The demand specification relies on four estimated demand parameters: an aggregate price elasticity, an aggregate frequency elasticity, an airline substitution elasticity, and a parameter for each airline's distinct qualities.² Parameters for the first three have been estimated and published in the literature (Brueckner and Spiller (1994), BTCE (1997), Gillen, Harris and Oum (1997), among others). The last parameter is estimated as a residual during model calibration. See PC (1998) for more detail.

BTCE (1997) estimated aggregate price elasticities for a number of Australian markets (Attachment F2). Where none was available, an average of similar countries was used (PC 1998). No estimates of frequency elasticities or substitution elasticities were available for Australian markets. Therefore estimates were taken from studies of non-Australian markets. Gillen, Harris and Oum (1997) reported a median value of 0.1 for estimated frequency elasticities in studies that attempted to measure responsiveness of aggregate demand to increases in the frequency of flights. They also found that among econometric

² Demand elasticities reflect the degree to which demand is responsive to changes in some other variable. An aggregate price or, respectively, frequency elasticity of 0.1, for example, indicates that a 1 per cent decrease in aggregate demand results if price increases or, respectively, frequency decreases by 10 per cent. Similarly, a substitution elasticity of -2 indicates that a 10 per cent increase in an airline's price results in a 20 per cent decrease in its market share.

studies the median value of the estimated degree of substitutability between airlines was 2.

Given that Australian estimates of substitution elasticities and frequency elasticities are not available, validation experiments were conducted to test how sensitive simulation results are to the substitution and frequency elasticities that are assumed in the model and to discover a range of values for which the model is best able to replicate observed prices and quantities (Section F7). Because of the difficulties in estimating price elasticities noted in Chapter 6, additional sensitivity experiments which varied the aggregate price elasticity were conducted (PC 1998).

F4 Network specification

The physical problem the airline faces is designing a network that moves its passengers from their origins to their destinations. In meeting passenger demand for travel, an airline chooses the following:

- frequency of service between cities on the network;
- number and type of aircraft used;
- scheduling of flights in the network; and
- routing/paths of passenger flows across flight sectors.

But its choice among these factors is limited by:

- airport constraints — for example, rights to gates and landing and takeoff slots;
- capacity of aircraft by type;
- distances/flight times between cities on the network;
- input lumpiness in aircraft, other physical capital, personnel and periodic maintenance;
- time taken to on- and off-load passengers and baggage; and
- ASAs.

The airline's economic problem overlays its physical problem and has a number of aspects. One aspect is to minimise the costs of meeting passenger flows in its network while ensuring its chosen quality of service. A second aspect relates to airline pricing across passenger types and ticket classes for which a range of prices is possible. The fixed costs of the network need not be recovered equally across flights and passengers. Yield management systems, for example, seek to fill planes by offering different fares, conditions and times to different types of passengers (Chapter 2).

It is beyond the scope of this project and the available data to replicate every aspect of an airline's network problem. Instead the aim is to develop an aggregated annual version of its pricing and network problem which has a solution that is approximately the same as its actual average annual behaviour. Thus, equations in the model ensure that every airline has sufficient aircraft capacity to carry its passengers and that passengers arrive at their destination and return to their origin. Finally, because an aircraft on a given flight sector can have passengers of different origins and destinations, prices in markets will be linked through the costs of flight sectors that markets share.

Network costs in the model have two components. The first is the flight sector component and comprises the costs incurred in moving passengers along the flight sector. The Commission derived its flight cost estimates from Aerocost2 (BTCE 1997). The second is an overhead component and includes all administrative expenses and the costs of ticketing, sales, commissions and adjustments for overrides.

Flight sector costs

Flight sector costs are divided into three categories:

- flight-specific costs are incurred no matter how many passengers are carried and include costs such as airport landing and take-off charges, fuel needed for an empty aircraft, flight personnel and aircraft maintenance;
- passenger-specific costs are costs that increase incrementally with the number of passengers (and their baggage) on board — essentially increased fuel costs and provisioning; and
- aircraft capital costs are an imputed hourly charge of the leased aircraft multiplied by the block hours of the flight.³

Aerocost2 data indicate that passenger-specific costs on a flight are small relative to total flight costs. Industry confirmed this cost structure. For example, passenger-specific costs for a Boeing 747–400 flying with a 75 per cent load factor from Sydney to Tokyo are approximately 15 per cent of total flight sector costs (including the capital cost of the plane).

³ The block hours of a flight denote the time elapsed from the aircraft leaving the departure gate to arrival at the arrival gate. Aerocost2 employs annual block hour use data in computing the hourly charge of the lease. Annual block hour use is representative of observed usage for each aircraft type operating in Australia. It is a consequence of network design and may be affected by changes in ASAs. Such changes would be incorporated in model simulations as a change in airline productivity rather than as a reduction in the hourly charge.

Overhead costs

The value of overhead costs was computed as being proportional to the total flight sector costs of the network at observed quantities. This proportion was estimated using ICAO's breakdown of costs into various cost categories with adjustments for freight and the above-average flight distances in the region (PC 1998). The computation estimated an average overhead charge of \$260 per passenger. The industry provided a range of opinion on this estimate and judged it acceptable for working purposes. Its reasonableness depended in part on how cost items, such as maintenance, are allocated to overhead and flight costs categories and on which sales commissions are included in the net fare.

Little information is available on how network characteristics affect overheads. Discussions with industry suggested that the size of overheads depends on the number of cities served (for example, airline city offices), the number of passengers carried on the network (for example, ticketing and sales costs that are included in net fares) and a general network size (for example, advertising). The modelling adopts a pragmatic approach by assessing the degree to which models need overheads to increase with the passengers carried to replicate observed quantities and prices.⁴

Omitting overhead costs can have economic welfare implications. If overhead costs were excluded from the model, then the returns covering overheads would be wrongly identified as economic rents rather than as the return necessary to recover costs. Prices that do not cover overhead costs represent a transfer from producers to consumers, and cannot be sustained in the long run. The effect of Ansett's entry on Australian economic welfare depends in part on Ansett's overhead cost because overheads are incurred as a cost of entry.

Airline productivity and costs adjustments

The industry and the Bureau of Transport Economics suggested that airline costs be adjusted to reflect:

- the absence of freight services;
- the differences in airline productivity; and
- the differences in airline input prices.

The absence of freight services in the model can make the industry appear less profitable because the model attributes all the costs of flying to passenger

⁴ For example, one industry source suggested an imputation of a share of overhead as a charge per revenue passenger kilometre. Unfortunately, time did not permit constructing a model and performing the relevant simulations with this overhead assumption.

services even though some costs are shared with freight. Also, differences in airline costs and productivity should be included in the model because airlines' costs differ according to their relative productivity and the input prices they face. In response to these views, the Commission made four adjustments to the Aerocost2 base estimates: two for freight costs, one for individual airline productivity and one for labour costs.

The marginal cost of a shared input is covered by the marginal revenue of all airline services that share it. Neglecting the marginal revenue of freight services implicitly imposes too high a marginal cost on passenger services. The share of freight services revenue in scheduled flight revenue is taken to be an estimate of the adjustment to shared flight costs for the marginal revenue from freight service. Aerocost2 flight-specific costs and capital costs are reduced by 15 per cent to account for the exclusion of freight services (PC 1998). The industry confirmed that these adjustments lead to 'ballpark' estimates of flight costs for Australian carriers.

The Commission constructed model costs for individual airlines over their flight sectors by applying to its Aerocost2 data the differences in airline labour costs and productivity as estimated by Oum and Yu (1995).⁵ Aerocost2 data were assumed to be representative of flight costs for the Australian airlines and for Air New Zealand.

Oum and Yu's analysis roughly divides most of the airlines competing with Qantas into four categories.

1. Airlines with the lowest wages, lowest input prices and low productivity include Thai International. This combination leads to higher operating costs but significantly lower overheads than those faced by Qantas.
2. Airlines with lower wages, lower input prices and higher productivity include Singapore Airlines, Cathay Pacific Airways and Korean Air. This combination leads to lower operating costs and overheads than those faced by Qantas.
3. Airlines with higher wages, higher input prices and higher productivity include British Airways and United Airlines. This combination leads to similar operating costs but higher overheads than those faced by Qantas.
4. Airlines with highest wages, highest input prices and low productivity include Japanese carriers and the other European carriers. This combination

⁵ The study by Oum and Yu (1995) is the most comprehensive and up-to-date study available on different airline networks productivity levels, input prices and competitiveness.

leads to significantly higher operating costs and overheads than those faced by Qantas.

Oum and Yu (1995) did not report on all the airlines in the model. Omitted or partly covered airlines were allocated to the categories as follows: Air New Zealand and Ansett International are taken as being as productive as Qantas with similar input and labour prices.⁶ Malaysia Airlines, Air China, EVA Air, Sempati Air, and Garuda Indonesia are classified in the first group. Finally, Oum and Yu estimated that Lufthansa and KLM were more productive than Qantas with higher input prices (as in the third group). Their labour prices were taken to be those of Alitalia.

The Commission applied Oum and Yu's estimates of airline productivity and cost differences to flight sectors in the following manner. Airline flight sector costs were adjusted for all the productivity differences that Oum and Yu estimated and only for the differences in labour prices according to labour's share in flight costs. Other flight costs were not adjusted because most other costs, such as navigation charges, landing costs, fuel costs and provisioning costs, will be similar for any airline operating over the same flight sector. Overhead costs, although not included in Oum and Yu's analysis, were adjusted by input price differences to reflect different prices for administration, ticketing, office space and the like.

Oum and Yu's estimates were not entirely accepted by industry analysts. For example, they pointed out that some airlines include commissions in revenues and costs while others exclude them. Because airline total efficiency depends on a revenue-share weighted average of freight and passenger service output, the use of revenue estimates constructed from differing revenue definitions will lead to biased estimates of relative efficiencies between airlines. Sensitivity analyses were performed to test whether model conclusions depend on the estimated differences in productivity and in input and labour prices (PC 1998).

F5 Airline behaviour

A number of possible airline behaviours were considered in the study. They include price-setting, price-taking, quantity-setting and codesharing behaviours. Each behaviour is coupled with a network choice which is constrained by international aviation agreements. All assume that airlines attempt to maximise profits over their networks. Two scenarios of airline behaviour were used extensively in the modelling work — price-taking behaviour and price-setting

⁶ One industry analyst suggested that Air New Zealand had significantly lower labour costs.

behaviour.⁷ The results in the report are for models of price-setting behaviour. Results for price-taking behaviour are discussed in sensitivity simulations.

Price-setting behaviour is preferred to price-taking behaviour as a behavioural assumption for three reasons. First, discussions with industry suggested that the airlines recognise that they have discretion in setting their prices. Second, observed levels of market concentration suggest that strategic behaviour between airlines is likely to be the rule rather than the exception, while the econometric literature shows that prices increase with market concentration. Third, the BTCE (1997) tested in a statistical sense whether published prices and the amount of travel were jointly determined or determined in sequence. It found that published prices were determined before the amount of travel with a lag of about one year.

Under price-setting behaviour, airlines recognise that non-price characteristics lead one carrier's air travel to be an imperfect substitute for another carrier's air travel. Consequently, they have discretion in setting the price of their services. Their price and network choices affect their competitors and the demand for their competitors' products.

Each airline takes into account the network and prices of its competitors (essentially computing the residual demand for its product) and chooses prices and flight frequencies to maximise its profits.⁸ An airline equates its marginal cost to the marginal revenues of its residual demand, leading to price discrimination. For example, a return price from Sydney to Tokyo may differ from a return price from Tokyo to Sydney. Prices differ across airlines because their marginal costs and market power differ. A lower cost airline will charge a higher price than that charged by a higher cost airline if its market power can support it.

F6 Model validation

Validation experiments were conducted for the model with broad coverage and the model with narrow coverage which was developed for the policy simulations (Sections F9 and F10). The former is based on a large number of

⁷ Quantity-setting behaviour, where airlines determine price levels by restricting frequency of service in their networks, was initially tested but rejected as a working behavioural hypothesis. The demand parameters that were needed for a valid model (discussed later) were far outside the literature's estimates of parameters. Time did not permit the incorporation of codesharing in the model.

⁸ Equilibrium is the point at which the choices airlines assume for their competitors are consistent with the choices the competitors make (PC 1998).

single market formulations without network interactions. The latter is based on a smaller number of markets with network interactions. Computing limits precluded the construction of a network model with the broad coverage while time did not allow applying all sensitivity experiments to the smaller network model. However, comparisons of similar sensitivity simulations and the cost sensitivity results discussed below indicate that the results for the broad coverage are consistent with those for the narrower coverage.

Validation experiments were performed to assess the range of underlying parameters and airline behaviour assumptions that lead to valid models — models that replicate observed prices and quantities. This was done for a number of reasons.

- The demand, price and cost data are from separate sources. A validation simulation tests whether the data and modelling framework can be treated together as representative of the industry.
- Unlike the demand and price data, the cost data are not observed in the market. They are Aerocost2 estimates that the Commission transformed to its cost classifications. Industry sources suggest Aerocost2 is correct to within a range of 15 per cent. Validation experiments that vary costs by these amounts test whether the initial assessments of the range of demand parameters and behavioural assumptions for valid models are robust to these changes in costs, and whether the costs are representative at all.
- Oum and Yu's estimated differences in airline productivity and input and labour prices are open to question. Therefore, it is important to determine whether conclusions about the validity of demand parameters and Aerocost2 costs depend on their estimates.
- The frequency and substitution elasticity parameters for the model are not based on estimates for Australian markets. Consequently, it is useful to assess whether the range of values for these parameters found in non-Australian markets lead to valid models in Australian markets.⁹
- Inquiry participants were sceptical of the accuracy of the initial price elasticity estimates. Therefore an experiment using price elasticity estimates for non-Australian markets was conducted.
- Validation experiments exclude from future consideration those parameter values that are not capable of reproducing observed quantities and prices within the modelling framework. Thus, they place bounds on parameter values for sensitivity analysis of policy simulations.

⁹ Qantas also warned that using elasticities for countries other than Australia could produce misleading results.

A full discussion of the validation sensitivity simulations is found in PC (1998). The results are summarised here. The valid price-setting models suggest a substitutability between airlines operating on Australian routes that is nearly twice that of the median estimate for non-Australian routes and a frequency elasticity that is approximately the median estimate for non-Australian routes. Simulations that approximately doubled the aggregate demand price elasticity in a valid model did not require significantly different ranges of substitution and frequency elasticities.

Aerocost2 estimates of flight costs are found to provide reasonable cost estimates within the industry's suggested range of plus or minus 15 per cent. This placed fairly narrow bounds on the range of substitution and frequency elasticity parameters that lead to valid price-setting models. In addition, the demand and cost results are not overturned when airlines' costs are assumed to be identical. This implies that Oum and Yu's estimates would have to understate grossly the degree of input price and productivity differences among airlines to overturn previous results.

Valid price-setting models leave little or no room for overhead costs to be allocated to passengers as a per unit charge. Instead marginal revenue is set equal to marginal flight sector costs to replicate observed prices and quantities. Overhead costs act as barriers to entry and allow airlines to price above flight marginal costs. The profitability of the airline will then depend on whether the wedge it drives between its operating costs and the price of its service covers the overhead costs of its network. Thus, the valid price-setting model depicts an international air travel market in which market power does not guarantee airlines significant economic rents. Airlines can make profits or losses as market conditions dictate. This is because travellers, after accounting for frequency advantages, view flights offered by the various airlines as highly substitutable.

F7 Economic welfare estimates

The model measures the economic welfare benefits of liberalisation by consumer surplus and airline profits for both domestic and foreign markets. Economic welfare changes in an economy are the sum of changes in consumer surplus arising from air services in the country and the profits of its national carrier(s). Given that prices are net fares, consumer surplus will include not only the consumer surplus of travellers but also any profits and taxes further along the marketing chain from the net fares.

This is a partial equilibrium analysis, so it does not measure the economy-wide benefits of any increase in tourism that may occur as a result of liberalisation. Airport congestion, pollution and impacts on government revenue and price

characteristics of air travel are not addressed. Nor is the spill-over effect on freight measured. It is presumed that any capacity increases in response to liberalisation will have a neutral effect on freight profitability, although they will result in more freight being carried.

Two partial equilibrium effects do point to likely economy-wide effects, however. Changes in total passenger travel indicate the direction of change in those air services activities that are needed regardless of the nationality of the airline. For example, all air travel to Australia requires baggage handling, boarding gate staff, air traffic control and terminal infrastructure. Therefore, the export of aviation services is not limited to exports by the Australian carriers. Increased air travel to Australia will lead to a general increase in the demand for all these services. These increases are not included in the calculations of the economic welfare analysis.

Changes in net tourism to Australia are used as an indicator of the direction of change in profits of industries associated with travel (such as tourism).¹⁰ Net passenger movements are better than inbound visitor movements as an indicator of the effect on tourism services because they account for changes in the numbers of Australians that travel abroad (and not at home).

F8 Effect of Ansett International's entry

One aim of current Australian policy is to encourage new (Australian) entrants in the air services market. Ansett International has entered a number of Asian markets, but the outstanding question is how Ansett's entry has affected prices, travel and economic welfare in Australia and in the other countries it serves.¹¹ This question is answered using the price-setting model as described above. Model results suggest that Ansett's entry:

- reduced airfares;
- increased passenger flows to Australia; and

¹⁰ Net passenger movements are inbound visitor movements minus outbound resident movements. A positive projected change means that inbound visitor passenger movements grew by more than outbound resident passenger movements. When net passenger movements are negative (more Australian outbound traffic than foreign inbound traffic), a positive projected change means the difference grew smaller. When net passenger movements are positive, a positive projected change means the difference grew larger.

¹¹ This study does not account for recent changes to Ansett's network as a result of the Asian economic crises.

- increased Australian and foreign net economic welfare.

Sensitivity simulations, discussed below, were conducted to test the sensitivity of these results to changes in model assumptions. Model results are found to be generally robust.

Two years, 1995 and 1997, are used for simulating the effects of Ansett's entry. As Ansett's market share increased in a number of markets from 1995 to 1997 (Table F4), results for 1995 would tend to understate the effects of Ansett's entry. Total demand also increased in this period.

Simulations are conducted by removing Ansett from the model to estimate what the market would have been like if Ansett had not entered it (PC 1998). Other airlines' cost structures are assumed not to change when Ansett is present, though flight sector costs change to reflect altered network choices.

The effects of Ansett's entry on the market can be placed in three categories: cost, competition and demand. The cost effect of Ansett's entry hinges on Ansett's costs relative to the industry. In the network model, Ansett is likely to have lower costs than the industry because Ansett's direct service is less costly than the indirect service offered by third-country carriers.¹² The competitive effect of Ansett's entry is increased competition in price and frequency. Both cost and competitive pressures should reduce prices and increase frequencies of service. The demand effects relate to product differentiation and the frequency of service offered by the larger number of airlines.

¹² Results reported in the draft report did not have a large cost effect, because the model was based on the single market models described above. Results reported here rely on the network model and therefore differ from those in the draft report.

Table F4 **Ansett's model market share, 1995 and 1997, and growth in total passengers, 1995–1997^a**

<i>Market</i>	<i>Ansett's market share</i>		<i>Growth in passengers</i>
	<i>1995</i>	<i>1997</i>	<i>1995–97</i>
	%	%	%
China	13	13	43
Hong Kong	17	18	6
Indonesia	10	14	36
Japan	8	9	6
Malaysia	1	10	22
Korea, Republic of	0	10	43
Taiwan	2	18	19
Total	8	12	18

a Computed from base data used in the model. Only includes carriers in the model. Ansett had minimal Korean market share in 1995 and was not included in the model for 1995.

Source: Commission estimates based on DTRD (1998).

One feature of the demand specification and parameter values in the model is that consumers prefer (with total frequency remaining constant) more frequent service on a few airlines to less frequent service on more airlines.¹³ That is, although consumers benefit from the lower prices induced by increased competition, they face an offsetting effect of reduced flight quality through the spreading of frequencies over more airlines. In fact, increased competition can reduce consumer surplus if no significant increase in aggregate quantity occurs and dominant airlines reduce their frequency of flights (PC 1998).

In addition to the frequency effect, Ansett's entry offers the opportunity for greater product differentiation. Product differentiation increases observed aggregate demand by better serving existing demand and tapping into latent demand.¹⁴ For example, if Ansett introduced a new non-stop service between two cities then, even though the airfare for travel between them may not change,

¹³ For example, passengers who miss flights can board the next flight offered by the same airline without undue delay. Similarly, time-conscious business travellers can travel on the same airline at times that allow them to coordinate with appointments at their destination and a return to their origin without undue delays.

¹⁴ Latent demand is demand that would otherwise not be served. Incumbents airlines have incentives to create product diversity but only if it increases current profits. In contrast, entrants have enhanced incentives to create product diversity precisely because it takes profits away from incumbents.

observed travel between them would increase because people residing in or near one of the cities obtain better service.¹⁵ Some existing passengers fly more frequently. Other people who would not fly indirectly now choose to fly directly. In this example, however, the source of the increased market diversity reflects both Ansett's decision to provide the service and governments' decisions to negotiate it. It is not possible to unravel the two. Consequently, the following results reflect both. The simulation assumes that Ansett successfully differentiated its service from those of its competitors.

Results

Ansett's entry is estimated to decrease price and increase quantity in every market it entered in 1995 and 1997 (Table F5). The price and quantity effects tend to be larger for those markets where Ansett obtained higher market shares. For example, the least affected markets are Malaysia, the Republic of Korea and Taiwan in 1995 where Ansett had little market share. By 1997, however, Ansett had increased its market shares. Its estimated effects on prices and quantities are therefore greater in 1997 than in 1995.

Ansett's entry leads to price increases in the Republic of Korea in 1995 through its entry's effects on its competitors' price and frequency choices. Ansett's entry forces third country airlines to use smaller aircraft to maintain their frequency as they lose market share. Smaller aircraft are more expensive to operate over the flight sectors in the model. Therefore prices increase.

The increases in quantity imply an increase in some aviation services in Australia regardless of the nationality of airlines.

¹⁵ Lederer represents this as a reduction in the total cost of travel which includes, for example, the passenger's valuation of time in travel, possible delays and the convenience of a non-stop flight.

Table F5 **Estimated changes in price and quantity by market from Ansett's entry, 1995 and 1997**

<i>Between Australia and:</i>	<i>1995</i>	<i>1997</i>
<i>Prices</i>	%	%
China	-4.1	-4.4
Hong Kong	-7.0	-6.8
Indonesia	-7.4	-7.7
Japan	-3.8	-4.3
Korea, Republic of ^a	0.1	-2.4
Malaysia	-0.9	-4.0
Taiwan	-1.1	-4.3
<i>Quantities</i>		
China	2.3	2.6
Hong Kong	5.3	5.3
Indonesia	1.5	3.4
Japan	2.6	3.0
Korea, Republic of ^a	0.1	0.6
Malaysia	0.8	2.7
Taiwan	1.0	2.7

^a Ansett had minimal Korean market share in 1995, and was not included in the Korean demand for 1995.

Source: Commission estimates.

Ansett's entry is also estimated to have increased Australian and foreign economic welfare in 1995 and 1997 (Table F6). In addition to the increase in economic welfare, Ansett's entry is estimated to have redistributed airline profits to consumer surplus through lower prices.¹⁶ In both years, the resulting economic welfare effect, although substantial, is much smaller than the underlying transfer of profit to consumer surplus.

¹⁶ These results are presented in an aggregated manner to protect detailed confidential data provided by airlines.

Table F6 Estimated changes in Australian and foreign gross profits, consumer surplus and economic welfare from Ansett's entry, 1995 and 1997

	1995	1997
<i>Australian</i>	\$m	\$m
Profits (gross)	-41.6	-57.5
Consumer surplus	70.0	89.9
Economic welfare	28.4	32.4
<i>Foreign</i>		
Profits (gross)	-75.9	-121.8
Consumer surplus	88.3	153.5
Economic welfare	12.4	31.7

Source: Commission estimates.

Ansett's entry increases consumer surplus for both Australian and foreign consumers in every country except for the Republic of Korea in 1995 (Table F7). The Korean market in 1995 experiences a price increase which reduces Korean consumer surplus. For Australian consumers, the major gains are achieved in Hong Kong and Indonesia in both 1995 and 1997. For foreign consumers, the gains are largest in Japan, although Japan's gains are not nearly as big a share of the increase in foreign consumer surplus in 1997 as in 1995.

Projected changes in net passenger movements can be examined to gain a sense of the likely impact of Ansett's entry on the demand for tourism services in Australia (Table F8). Ansett's entry leads to larger positive net passenger movements or smaller (in absolute value) negative net passenger movements for four of the countries (Japan, the Republic of Korea, Malaysia and Taiwan) in 1995 and for all countries except China in 1997. The changes in net passenger movements tend to reflect price reductions from Ansett's entry. That is, if net passenger movements are positive (more inbound visitors than outbound residents), then Ansett's entry leads to a bigger positive net passenger movement and consequently a percentage increase in net passenger movements. The negative net passenger movements for China, Hong Kong and Indonesia in 1995 reflect a tilt in Ansett's passengers towards outbound resident movements that is greater than that for the industry. Total net passenger movements are estimated to increase by 2 per cent.

Table F7 Estimated changes in Australian and foreign consumer surplus from Ansett's entry by market, 1995 and 1997

<i>Between Australia and:</i>	<i>1995</i>	<i>1997</i>
<i>Australian consumer surplus</i>	\$m	\$m
China	5.5	7.6
Hong Kong	24.2	23.3
Indonesia	36.3	44.6
Japan	3.5	4.6
Korea, Republic of ^a	0.0	1.3
Malaysia	0.5	7.1
Taiwan	0.0	1.4
Total	70.0	89.9
<i>Foreign consumer surplus</i>		
China	3.5	5.4
Hong Kong	16.8	19.5
Indonesia	0.2	10.4
Japan	65.2	79.2
Korea, Republic of ^a	-0.6	11.6
Malaysia	0.9	9.0
Taiwan	2.3	18.4
Total	88.3	153.5

^a Ansett had minimal Korean market share in 1995. It was not included in the Korean demand for 1995.

Source: Commission estimates.

The increase in total net passenger movements is larger in 1997 (3.7 per cent) than in 1995 (2 per cent). This is because the estimated price effects for Malaysia, the Republic of Korea and Taiwan are larger in 1997 than in 1995, leading to a larger increase in net passenger movements in both absolute number and percentage.

Despite their large percentage changes in 1997, changes in net passenger movements for China and Hong Kong make only a small contribution to total net passenger movements. Indonesia and Japan are the most important markets in determining total net passenger flows. The results for China and Hong Kong reflect the balance in the market between the Australian resident and foreign visitor flows, leading to a small base value for net passenger movements. Thus even though the price reductions from Ansett's entry induce a small change in

net passenger movements and a small contribution to total net passenger movements, the percentage changes in net passenger movements are large.

Table F8 Estimated changes in net passenger movements to and from Australia from Ansett entry, 1995 and 1997^a

<i>Between Australia and:</i>	<i>1995</i>	<i>1997</i>
	%	%
China	-3.1	-47.0
Hong Kong	-7.1	92.8
Indonesia	-2.4	5.2
Japan	2.7	2.9
Korea, Republic of ^b	0.1	0.4
Malaysia	1.4	2.3
Taiwan	1.2	2.7
Total	2.0	3.7

a Net passenger movements are inbound visitor movements minus outbound resident movements.

b Ansett had minimal Korean market share in 1995. It was not included in Korean demand for 1995.

Source: Commission estimates.

Sensitivity results

The main results of the Ansett simulations are that Ansett's entry reduced airfares, increased passenger flows to Australia and increased Australian and foreign net economic welfare. These results were tested in sensitivity experiments against the following alternative behavioural, cost, and demand scenarios:

- airlines act as price-takers;
- Ansett does not increase product diversity;
- airlines have identical productivity and input prices; and
- demand parameters are different (but the model is still valid).

The price-taking scenario is interesting because it explores the cost and demand effects of Ansett's entry without any competitive effects. That is, Ansett's entry cannot increase price competition, because airlines are assumed in the scenario to act as price takers. The significant result of this scenario is that Ansett's entry is more likely to be welfare enhancing if it reduces industry costs or if it contributes to product diversity.

The second scenario assumes that demand is diverted to new entrants without drawing on any latent demand. It is a ‘worst case’ scenario for Ansett’s entry to be economic welfare improving because it assumes Ansett’s international network was not significantly different in its city or client focus from that of its competitors. That is, despite profit incentives, it did not, or could not because of ASAs, differentiate its service from that of other airlines and simply diverted passengers from them. Under this scenario, consumer surplus gains are still obtained, but they do not outweigh the profit declines of incumbent airlines.

The third scenario assumes there are no productivity or input price differences among airlines. The main results are the same for this scenario. The importance of this result, given that airlines have cost differences, is that differences in airlines costs would have to be considerably greater than those estimated by Oum and Yu to reverse the model’s results. Although the industry criticised the assumptions of the productivity estimates, the industry’s suggested alternative productivity differences are not large enough to overturn the significant model results.

Finally, the major results for prices, total and net passenger inflows and economic welfare are unchanged for changes in demand parameters that still lead to valid models. The pattern of economic welfare changes is altered somewhat for more price elastic aggregate demand. When aggregate demand is assumed to be price elastic (the alternative suggested by Inquiry participants), the economic welfare gains are positive and larger in absolute value relative to the reduction in airline profits. That is, the efficiency gains of Ansett’s entry are increased relative to its redistributive effects.

F9 Effects of a plurilateral open club

The Government asked the Commission to assess various options for reform of Australia’s ASAs. One option is a plurilateral open club characterised by a single liberal ‘open skies’ agreement applying to all club members (Chapter 9). The network model developed for the Ansett entry simulations was used to explore how freeing up airline networks and competition in an open club affects the economic welfare of club members. Because of limitations to the model, data and scenarios, simulation results are illustrations, not predictions, of how the economic forces unleashed by an open club agreement could transform international air travel markets inside and outside the open club. The results illustrate that open clubs that allow airlines to achieve efficiency gains and to construct their most profitable networks increase the economic welfare of club members.

Network effects in open clubs and modelled scenarios

Current ASAs place constraints on airline networks. Open clubs release club members from these constraints inside the club and can tangentially affect markets for travel to non-member countries. Model simulations explicitly consider the two likely network effects of open clubs:

- open club airlines become more efficient; and
- open club airlines can enter all open club markets and fly directly between any two ‘foreign’ countries in the club.

Less efficient airlines in an open club are forced to lift their game or leave club markets. More efficient airlines will face greater competition as other airlines improve their efficiency. Incentives to improve efficiency will increase because profit opportunities are enhanced for any airline that improves its efficiency or carves out a larger slice of the market. Finally, improvements in network management may spill over from open club markets to all markets in the airline’s network.

The *airline efficiency gains* effect is modelled as follows. All airlines in the open club are assumed to attain a benchmark level of efficiency as estimated by Oum and Yu (1995).¹⁷ The assumed increase in efficiency is due to competitive pressures within the club. No incumbent airline exits any market.

Under current ASAs, airlines of open club members must fly through their home country or obtain fifth freedom permission in order to fly passengers from one foreign country to another. Under the open club, they can choose to fly directly between the foreign countries in the club, or set up hub and spoke networks with hubs in other member countries to fly passengers between any two spoke countries within the club. Consequently, airlines of open club members will be able to enter any market within the club and construct networks on the basis of market fundamentals with only those restrictions imposed by the capacity- and freedom-dictates of ASAs with non-member countries.

Market entry with direct flights is modelled as follows. Club airlines can fly direct flights between any two countries in the open club. They can also enter markets for travel between other club members (Japanese carriers can enter the Australia–Hong Kong and Australia–China markets. Chinese carriers can enter the Australia–Japan market.). Each entrant is assumed to add five per cent to the

¹⁷ Oum and Yu (1995) estimated that Cathay Pacific is the most efficient airline among the open club airlines.

size of the market.¹⁸ It does this by tapping into latent demand for travel, for example, by providing better connections or departure times than incumbents provide. No incumbent airline exits any market.

The effects are used in three scenarios:

- scenario A applies efficiency gains and market entry with direct flights between foreign countries;
- scenario B applies efficiency gains only; and
- scenario C applies market entry with direct flights between foreign countries.

Scenario A reflects that, by freeing airlines to form their most profitable networks, open clubs will unleash many effects. The final two scenarios allow the respective economic effects to be separated.

The choice of club members is illustrative and not based on any expectations by the Commission of the likelihood of any of the countries entering into such a club. The simulations assume the following club, country, market and airline coverage:

- open club members are Australia, China, Hong Kong and Japan;
- country, market and airline coverage is that for the Ansett simulations (markets for travel between Australia and China, Hong Kong, Indonesia, Japan, the Republic of Korea, Malaysia and Taiwan); and
- the club airlines are Ansett, Qantas, China Airlines, China Southern Airlines, China Eastern Airlines, Cathay Pacific, Japan Airlines and All Nippon Airlines.

Club membership was chosen because the distances between China, Hong Kong and Japan allow hub and spoke networks to be set up by all club members in any of the countries. In addition, aircraft can fly one long sector from Australia and be turned around to fly a short sector in the northern part of the club within a day, arriving at the final destination at a convenient hour for travellers and within airport curfew times. The latter feature increases aircraft utilisation and the revenue each aircraft can generate in a day. Without the club, aircraft arriving from Australia may have to sit for an extended period at a foreign port to obtain desirable departure and arrival times before returning to Australia.

¹⁸ Five per cent was chosen for illustrative purposes. It is less than one half that observed for Ansett in its smallest market. Thus it represents a minimum market penetration that entrants would aim to achieve. Nevertheless, the Commission stresses that this is an assumption only and the results flowing from it are illustrative, not forecasts. A greater or lesser level of additional traffic could be assumed, thereby affecting the magnitude but not the direction of the results.

Limitations of open club scenarios and their implications

Three limitations of the open club scenarios bear specific mention:

- Oum and Yu's efficiency estimates are representative of uniform differences in efficiency between networks;
- assumptions are made in the scenarios regarding airline entry, exit, and product differentiation; and
- markets are limited to those involving travel to and from Australia.

The limitations have important consequences for the interpretation of results.

Efficiency estimates

Oum and Yu (1995) formulate their efficiency estimates by constructing indices of inputs and outputs for each airline. The output index is calculated using a revenue weighted average of each airline's passenger and freight service output adjusted for average stage length. If these adjustments aggregate outputs correctly, then the estimated efficiency differences are attributable to the relative ability of airline management to produce output with the least amount of inputs.

Three reservations must be stated. First, even if Oum and Yu's methodology and interpretations of efficiency are correct, the estimates are only as good as the data used and the data's comparability across airlines. ICAO data were the primary source of industry information for Oum and Yu. As noted by the industry, airlines use different accounting definitions which may undermine the comparability of ICAO data across airlines. Second, their aggregation of airline output may have deficiencies. For example, other output characteristics, such as the number of cities served or the frequency of service, are omitted (Kirby 1986). The omissions would bias efficiency estimates favourably towards airlines that have lower frequencies of service and serve fewer cities because both characteristics increase network costs for the same number of passengers carried in a network. Third, Oum and Yu did not estimate efficiency and input prices for the Chinese airlines. Chinese airlines efficiencies and input prices are assumed to be those estimated for Thai Airways.

If Oum and Yu's estimation and interpretation of efficiency differences are reasonably correct and Thai Airways costs and efficiency are representative of those for Chinese airlines, then Scenario B offers insights into the direction of change that efficiency improvements will push the industry. However, given the above reservations, a more conservative interpretation is that they are a specific formulation of the general effects discussed above and thus illustrate those general effects for a special case.

Entry, exit and product differentiation

The directions of change in airline profits, consumer welfare and, therefore, economic welfare by country depend on the assumption of no exit.

Under the efficiency gains scenario, the assumption of no exit implies that all airlines improve their efficiency. When all airlines improve to the benchmark, the benchmark airline suffers reductions in profits, because by assumption it is the benchmark. In contrast, the inefficient airlines enjoy increases in profits, because by assumption they improve to the benchmark, competing more vigorously against their erstwhile more efficient competitor.

An alternative and no less plausible assumption is that open club airlines achieve the benchmark efficiency because efficient airlines force inefficient airlines to exit the market. The opposite effect on airline profits would be observed in this case: Efficient airlines increase their profits as they dominate markets and inefficient airlines suffer reductions in profits as they lose market share or exit the market.

In the context of direct flights with market entry, the assumptions of no exit and of a modest increase in product diversity imply an unknown a priori net effect on consumer surplus that depends on three factors. First, an assumed entry with no exit of incumbent airlines increases the number of airlines serving a market. Prices can be expected to decrease from the increase in competitors. Second, new entrants on routes are also assumed to add modestly to product diversity, increasing consumer surplus. However, the modest increase also limits their ability to compete effectively in the market. Finally, entry confronts the consumer preference for more frequent service on fewer airlines. The net effect on consumer surplus is only known after the simulation is completed.

In reality, the industry has indicated that a significant market presence is crucial to compete effectively. Obtaining a minimum market presence may not be an optimal strategy. Instead the optimal strategy may be attaining a large market presence. In this case, the product diversity that taps into latent demand may also take customers from incumbents. A long-run outcome may see one or more airlines exit the market.

Travel to and from Australia

Because of data limitations,¹⁹ the model does not explicitly account for markets between non-Australian club members (for example, the market for travel between Hong Kong and Japan). Consequently, the simulation cannot provide

¹⁹ For example, for non-Australian routes there were no price data or passenger origin-destination data as found in Avstats.

estimates of the total economic welfare effects of the open club. In particular, its estimates omit:

- increases in Australian airline profits and Australian economic welfare from Australian airlines' entry into completely foreign markets;
- decreases in foreign airline profits from Australian airlines' entry into completely foreign markets; and
- increases in foreign consumer surplus in travel between two foreign countries from Australian airlines' entry into those markets.

Implications

Given the limitations of the model and the modelled scenarios as described above, the most reliable estimates of changes in profits, consumer surplus and economic welfare are for open club members in total; they are reported here. Individual country estimates are not reliable and depend strongly on scenario assumptions; they are not reported.

For example, the use of the efficiency estimates and the assumptions of airline entry and exit imply that model results for changes in profits by airline are direct consequences of scenario assumptions and not consequences of any underlying economic behaviour in the model. Therefore, estimated changes in profits by airline in markets for travel to and from Australia have little descriptive worth. They are even less appropriate as estimates of changes in profits by airline for all markets in the open club, because, as noted above, the exclusion of completely foreign markets omits likely increases in profits for Australian airlines and likely reductions in profits for foreign airlines. However, the estimated changes in profit for all airlines in club countries are more reliable and relevant, because they do not imply specific winners and losers. They estimate the total effect on profits across all airlines reflecting the net change in profits among airlines.

Results for Australian markets

The net economic welfare gains in all three scenarios show a large gain for club members and a small loss for non-club countries (Table F9). The principal reasons for the results can be traced to the modelled effects of open clubs:

- As club airlines' productivity improves, their costs fall and they compete more vigorously against other airlines by cutting their prices or increasing the frequency of their services.
- Freed from the constraints of current ASAs, all club airlines redesign their networks to serve their markets to and from Australia better. In doing so

they can offer both direct flights and indirect flights in a hub and spoke system. Direct flights keep costs down while the hub and spoke system increases frequency of service.

- Market entry by club airlines on routes increases competition because it is assumed that no incumbent airlines leave. The competitive pressures of entrants increase with their size because large entrants compete more strongly against incumbents in frequency and ticket prices.

Scenario A combines all these effects. Scenario B isolates the first effect. Scenario C isolates the second and third effects. But there are some important interactions between the three effects, so that the results of Scenario A are not simply the sum of results for Scenarios B and C. The separate impacts of Scenarios B and C are discussed first before their combined impact in Scenario A is analysed.

Scenario B results

Scenario B shows that the main beneficiaries of efficiency improvements are consumers (Table F9). The consumer surplus gains in club countries are nearly ten times the size of the increased club airline profits. In non-club countries, consumer surplus increases whilst the profits of non-club airlines fall. In addition, the fall in profits for all airlines (club and non-club combined) suggests that efficiency gains are passed on to consumers, while airlines that improve their efficiency take profits from their rivals.

Efficiency gains are passed on to consumers in lower prices and increased flight frequencies. Consumer surplus increases in both club and non-club countries as a result. Prices in non-club markets fall because club airlines become more efficient in all their markets, and they lower prices to passengers flying to non-club destinations. Examples of this could be more efficient uses of aircraft which are used in club and non-club countries. In addition, the competitive lessons learned in open club competition can be applied in non-club markets too. These lessons could be in the areas of network design, fleet usage and marketing, among others.

Table F9 **Estimates of changes in net economic welfare from various open club scenarios^{ab}**

	<i>Scenario A</i>	<i>Scenario B</i>	<i>Scenario C</i>
	<i>Efficiency gains plus direct flights and market entry by club airlines on routes to and from Australia</i>	<i>Efficiency gains</i>	<i>Direct flights and market entry by club airlines on routes to and from Australia</i>
	<i>1997</i>	<i>1997</i>	<i>1997</i>
	\$m	\$m	\$m
<i>Club members^c</i>			
Profit (gross)	-38.4	15.6	-30.4
Consumer surplus	291.6	152.1	73.2
Economic welfare	253.2	167.6	42.8
<i>Non-club members</i>			
Profit (gross)	-29.7	-24.7	-4.3
Consumer surplus	23.4	24.3	-0.3
Economic welfare	-6.3	-0.4	-4.6

a Estimates exclude economic welfare effects in markets between non-Australian countries in the club. These could not be estimated due to the lack of data on prices and passenger flows (by origin–destination and airline) between non-Australian countries in the club.

b Markets covered are between Australia and: China, Japan, Hong Kong, Malaysia, Republic of Korea, Taiwan and Indonesia.

c Club countries are Australia, China, Hong Kong and Japan. Club airlines are Ansett, Qantas, China Airlines, China Southern Airlines, China Eastern Airlines, Cathay Pacific, Japan Airlines and All Nippon Airlines.

Source: Commission estimates.

Airlines that become relatively more efficient (all club airlines except the benchmark) gain at the expense of those that become relatively less efficient (non-club airlines and the benchmark). Consequently club airlines' profits increase in total, while non-club airlines' profits fall. Competitive forces compel club airlines to pass on some of these cost savings to consumers through lower prices. This would create pressures for non-club airlines to either join the club, improve their efficiency or scale back their presence in markets served by club airlines.

Scenario C results

In Scenario C, the assumed increases in the number of airlines competing on routes between club members lead to price reductions in most club markets, profit declines for club and non-club airlines, and consumer surplus and economic welfare gains in club countries.

The price falls in Scenario C are driven by increased competition in the markets that club airlines enter and by their ability to cut costs by flying passengers directly to their final destinations. Club airline profits fall in Scenario C mainly as a result of the price falls. Non-club airline profits fall because they are unable to modify their networks to reduce costs while club airlines enter markets and restructure their networks.

Consumer surplus increases in open club countries because prices fall, frequency increases and the number of airlines connecting some club countries to Australia rises. Consumer gains in club countries are more than twice as large as profit losses. Economic welfare increases as a result.

Non-club consumer surplus declines marginally. This result is not surprising since non-club flights remain constrained and cannot benefit from the open club's improved network design or greater competition. In fact, the increase in direct flights by some club airlines out of Australia reduces the number of flights in some airlines' hub and spoke networks. This reduces their frequency of service to non-club destinations and adversely affects the consumer surplus of those non-club countries.

Scenario A results

The results of Scenario A are best explained as the efficiency gains of Scenario B compounding the competitive and network effects of Scenario C — improving productivity enhances the competition of freer networks. In particular, Scenario A shows:

- greater profit declines in moving from Scenario C to Scenario A come mostly at the expense of airlines in non-club countries (\$8 million reduction in club profits compared to a \$25 million reduction in non-club profits); and
- more vigorous competition increases consumer welfare by approximately 20 per cent more than the sum of Scenarios B and C would suggest.

In addition, the combined effects of efficiency gains and direct flights with market entry lead to considerable gains in club member consumer surplus and economic welfare with, by comparison, small changes in club airline profits. For non-members there is a net economic welfare loss, despite the spill-over

efficiency benefits from open club airlines, because non-club airlines lose competitiveness to club airlines.

The gains in club members' consumer surplus are because the three open club effects have increased the vigour of competition, resulting in prices being pushed down.

The combined effects of productivity improvements, network design changes and market entry have a compound, rather than additive, effect on the degree of competition within the club. Within the club, new entrants compete with incumbents on price, frequency and cost, raising the level of competition above that in Scenarios B and C. Unlike Scenario B, incumbents cannot afford to retain some of the benefits of the productivity improvement, because new entrants can undercut them by charging prices that are closer to reduced costs faced by club airlines. These price effects are reflected in the consumer surplus and profit results across the three scenarios.

The deep price cuts within the club in Scenario A result in open club consumer surplus rising substantially. For club countries the increase in consumer surplus is greater than the sum of consumer surplus gains in Scenarios B and C.

Non-club consumer surplus increases as club airlines' productivity gains and frequency increases spill over into their non-club operations. Because there is no entry to these markets, the effects of Scenario A are approximately the sum of those for Scenarios B and C.

In Scenario A, club airlines sustain a net fall in the profits on their operations to and from Australia which is a result of these price falls. Consumers benefit from lower prices, increased frequency and greater choice. This result indicates that most of the benefits from the efficiency gains and improved network designs are passed on to passengers. The change in the net economic welfare of club countries is strongly positive because the gains in consumer surplus more than offset the combined profit declines of the eight club airlines.

Non-club countries suffer a small loss in their economic welfare as a result of the open club. This is because the profit decreases suffered by their airlines are greater than the gains in consumer surplus by non-club residents. Both effects are driven by the price falls to non-club destinations.

Network design changes as a result of the open club

Simulations A and C show that club airlines create new networks which utilise direct flights and hub and spoke systems. These new network designs permit airlines to fly lower cost direct flights from a club member, while increasing frequency of service via a hub and spoke system. These changes are illustrated

for Ansett, Cathay Pacific and Qantas (Table F10). Scenario B reflects the old network constraints which prevent Ansett and Qantas using Hong Kong as a hub and Cathay from flying its passengers directly to Japan from Australia.

Table F10 Shares of passengers flying from Australia to selected open club destinations using direct and indirect routes, selected club airlines

<i>Passengers by airline and origin– destination</i>	<i>Scenario A</i>		<i>Scenario B</i>		<i>Scenario C</i>	
	<i>Direct routes</i>	<i>Indirect routes</i>	<i>Direct routes</i>	<i>Indirect routes</i>	<i>Direct routes</i>	<i>Indirect routes</i>
	%	%	%	%	%	%
<i>Cathay Pacific</i>						
Australia to Japan	58	42	0	100	63	37
Australia to China	0	100	0	100	0	100
<i>Ansett</i>						
Australia to Japan	100	0	100	0	100	0
Australia to China	0	100	100	0	0	100
<i>Qantas</i>						
Australia to Japan	100	0	100	0	100	0
Australia to China	94	6	100	0	94	6

Source: Commission estimates

Table F10 shows the network changes in both Scenarios A and C are:

- Cathay Pacific chooses to fly most of its Australia–Japan passengers directly, rather than flying all of them through its Hong Kong hub. It continues to fly the remainder of these passengers via Hong Kong.
- Ansett switches to using Hong Kong as hub for all its China bound passengers, who are flown to Hong Kong then transferred on to smaller aircraft for the flight to China.
- Qantas continues to fly the vast majority of its open club passengers directly to their destinations from Australia. However, it too finds Hong

Kong a useful hub for marginally increasing the frequency of its services to China, thereby giving it a competitive advantage.

The unconstrained networks of the open club allow airlines to construct networks that provide better services in both price and quality terms. As the sectors that club airlines are allowed to fly increase, the airlines are able to increase flight frequency by establishing hub and spoke networks to service passengers flying between club countries. The model results show that Hong Kong is preferred as a hub over Beijing and Tokyo. Club airlines weigh up the cost savings from lower cost direct flights against the competitive benefits of greater frequency to many of their destinations by using Hong Kong as a hub. Airlines choosing to set up hub and spoke systems also incur marginally higher costs as they trade off higher costs from operating smaller aircraft on some flight sectors serving a hub against the competitive advantages of increased frequency.

Attachment F1 Independent reference panel reports

Dr Christopher Findlay, Associate Professor, Department of Economics, University of Adelaide

The modelling work undertaken by the Commission for this inquiry is a novel and valuable tool for policy analysis which is relevant to the terms of reference.

The model structure is built upon up-to-date analytical methods. It is a novel approach to the analysis of policy reform in this sector. There are few examples of such techniques applied to these questions and the Commission's work is at the forefront of research in the field. Once the report is released, the modelling work is likely to receive considerable attention from the community of researchers in this field.

The modelling work applies the available statistical evidence on relevant parameters. An analysis of the sensitivity of the results to choices of parameter values is also applied where that is judged to be useful and insightful.

The model constructed is best applied to the comparison of scenarios in which various dimensions of policy are changed. Its estimates of the effects of policy change are credible, in terms of their orders of magnitude, and understandable, in terms of the directions of their effects. The policy is not designed for use as a forecasting device.

The model can be and has been applied to a series of experiments which are relevant to the inquiry. These include the analysis of the effects of the introduction of a multiple designation policy and other reforms to international policy, in particular, the adoption of an open club model. The choices made of base cases against which to compare the policy changes are relevant and insightful. The sets of results include a series of indicators including price, quantity and welfare effects which are relevant to policy analysis.

Like all good modelling work, the application of the techniques used here not only produces sets of results which indicate orders of magnitude associated with particular policy changes. It also contributes to the clarity and specificity of the policy changes proposed. In addition it highlights side effects or feedbacks that occur as a result of policy changes which might otherwise have gone unnoticed. Finally, it permits the division of the total effects of a policy change into various components, which is an important contribution to our understanding of the origins of the results.

Dr Ralph Snyder, Associate Professor, Department of Econometrics and Business Statistics, Monash University

In my capacity as a Reference Panel member I have read documents provided by the Productivity Commission, met with the modelling team, attended two workshops run by the Productivity Commission and have been a discussant at one of these workshops. I have written a detailed interim report that highlighted shortcomings in earlier documentation²⁰ of the model. Most of the concerns outlined in the interim report have been adequately addressed in more recent documentation.²¹

Overview of model

The model has been developed to gauge the impact on airfares, costs and quantity of travel of:

- current negotiated capacity restrictions;
- the entrance of Ansett into the international market; and
- alternative bilateral and multilateral policies.

An implicit objective has been to examine the effect of these factors on consumer surplus and aggregate welfare.

The model is really two distinct mathematical constructs of two forms of competition:

- oligopoly where airlines have discretion over price but maximise profit on the assumption that the prices of competitors remain unchanged (Bertrand solution); and
- perfect competition where airlines have no discretion over price. Profits are maximised subject to prices determined by aggregate demand and supply conditions in the market place.

General opinion at the first workshop, with which I concur, was that the oligopoly model was the best description of the type of competition currently prevailing in the international airline industry.

Given the complexity of industry operations the model itself is both large and complex. Products, of which there are a large number, are distinguished by

²⁰ 'Blue Sky' Modelling of Australasian Air Travel and technical appendix.
Update on Costs, Profits and Validation Simulation.
Further Update on Sensitivity Simulations.

²¹ Impacts of Competition Enhancing Air Service Agreements: A Network Modelling Approach.

source and destination city pairs. An airline's product demand is assumed to depend on:

- its own price;
- the prices or 'outputs' of competitors;
- flight times;
- number of intermediate stops; and
- flight frequency.

Other factors mentioned, but not modelled due to constraints on development time, are class of ticket and seasonal effects.

All models involve a spatial 'production function' consisting of a network of interconnecting flight paths. Costs are divided into those that are directly related to the:

- number of passengers;
- frequency of flights;
- fixed costs associated with cities in the network; and
- fixed costs associated with the network as a whole.

The constraints consist of:

- flight limitations imposed by airline agreements;
- restrictions on arrivals and departures;
- logical network constraints on flows of passengers and aircraft; and
- plane capacity constraints.

Substantive comments

Given its size and complexity, it is no simple matter to validate a model of this kind. Attention to detail in documentation can be critical. Earlier shortcomings made it difficult to crosscheck the computer code, written in the GAMS modelling language, with the model specification. Although current documentation is greatly improved, the GAMS code still does not cross-reference equations by equation number. This makes it difficult for someone external to the team to directly assess the code. Over the short period of my contact with them, however, the modelling team proved to be very professional in all other respects. It would therefore surprise me if the computer implementation were not correct. General opinion at the first workshop, with which I concur, is that the model specification seems to be a reasonable response to the objectives of the Inquiry. The specification is based on standard microeconomic concepts. The one exception, the network concept, was needed

to adequately represent the various flight paths of the airlines. I am satisfied that the model specification is logically sound.

A long run model ideally addresses the objectives of the Inquiry. By necessity, however, a short run model was built. Some costs were fixed. Airline numbers were also fixed. It is now appropriately stated in their documentation that any results effectively apply at a point in time

To elaborate this point, any results from the model should be qualified by the following considerations:

- the model does not allow for the impact of changes on the structure of networks and their costs. New network configurations might emerge from a relaxation of entry barriers;
- the model cannot properly account for the behaviour of potential entrants. There is little evidence upon which objective deductions can be made;
- it ignores the potential impact that competition could have in reducing technical inefficiency²² with current technology. Again there is little evidence to draw on; and
- it ignores the pressure for greater technological change wrought by additional competition.

The modelling group found it difficult to obtain good estimates of price elasticities. When this problem was raised with industry people at the second workshop, general opinion was that the estimates used in the model were not particularly reliable. Some doubts about the results of the model, given this particular difficulty, were expressed. Further sensitivity analyses may or may not dispel this view.

To conclude, it should be emphasised that the value of a model does not lie solely with its capacity to produce reliable results. Important benefits are often gained in practice from the process of model building. Model building provides a systematic way of learning about the phenomena under investigation, offering a focus for inquiry that transcends its mathematical form. It supplies a conceptual framework to order thoughts and systematically explore ideas. Thus the process of model building can inform those more general lines of inquiry that ultimately feed into policy formation. This was probably the major benefit of the current model for the Inquiry.

²² The term 'technical inefficiency' is used here in its conventional economics sense.

Attachment F2 Demand elasticity estimates

Table F11 Estimates of airfare demand elasticities for leisure and business travel to and from Australia

<i>Country</i>	<i>Leisure travel</i>		<i>Business travel</i>	
	<i>Foreign arrivals</i>	<i>Australian departures</i>	<i>Foreign arrivals</i>	<i>Australian departures</i>
Germany	-1.23	-0.50	-0.55	–
Italy	-0.56	-0.29	*	-0.19
United Kingdom	-1.79	-0.14	-0.21	-0.20
Japan	-0.79	-1.16	-0.24	–
Korea, Republic of	-0.50	-1.14	-0.20	-0.40
Taiwan	-0.83	-1.19	–	*
Indonesia	-1.46	-0.48	-0.62	-0.01
Malaysia	-0.78	-0.95	–	-0.29
Singapore	-1.86	-0.54	-0.22	-0.12
Fiji	-0.80	-0.53	*	*
New Zealand	-0.68	-0.23	-0.16	-0.34
United States	-1.85	-0.64	-0.45	–

Note: Travel demand equations were estimated using quarterly data from March 1986 to June 1994.

* The BTCE could not estimate statistically robust models for these countries.

– Variable was omitted from the model as it added no further explanatory power.

Source: Adapted from BTCE (1995).

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